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Original Contributions.

FILLING PULPLESS TEETH WITH FISTULOUS OPENINGS.

By W. J. Morgan, D.D.S., Mineral Point, Wis. Read Before Southern Wisconsin Dental Association, at Janesville, May 3-4, 1899.

When filling pulpless teeth with fistulous openings the soft, decalcified and infected dentin should first be removed from the cavity and the pulp-chamber thoroughly opened up. The putrescent contents of the canals should be removed as may be by way of the cavity, to accomplish which the chamber and canals should be flooded with an antiseptic, and this absorbed with cotton or bibulous paper. When the canals are cleaned the abscess should be injected with the antiseptic through the canals, and the process kept up if possible till the medicine appears at the fistulous opening on the gum.

The best way ordinarily to inject an abscess is to pack the canal tightly with cotton saturated with the medicine, and to force down on it a piece of rubber such as is used for vulcanizing plates. When the medicine appears at the fistulous opening, if it is of recent occurrence, the cavity may at once be sealed. After replacing the cotton in the canal, saturate with an antiseptic and dismiss the patient for a week.

If the fistula is of long standing, and the dentin of the root seems much infected, it is best after the injection to flood the canal with alcohol and evaporate to dryness before applying the antiseptic and sealing the cavity. This insures a more thorough saturation of the tubuli with the antiseptic and the root will return to a sweeter condition than if the drying process has been omitted. At the end of the week all ordinary abscesses will be cured if this practice has been followed faithfully. When the patient returns and the fistula is found perfectly closed, the root may be filled at this sitting by same process as employed under normal conditions.

If the fistula still discharges a change is called for, and usually Black's 1-2-3 is used. If care has been exercised in cleaning the canal, evaporating the moisture and sealing the antiseptic in the canal for one week, and the canal is in condition which will not account for the persistence of the fistula, the trouble is probably beyond the apex, and the tissues at that point require more vigorous medication than that applied at the first sitting. They need stimulation and cauterization to break up the chronic condition. With this intention Dr. Chittenden's carbolic acid (95 per cent) is injected till it appears at the opening. The canal is then packed with cotton saturated with carbolic acid, the cavity sealed and the patient dismissed.

If there has been much discharge with a free opening, pyrozone (3 per cent) may be injected prior to the use of carbolic acid and sealed for a week: this treatment may be repeated if the fistula is found open at the end of that time. When the discharge is slight once in two weeks is sufficient to treat after second sitting. Frequent treatments should be avoided unless there should be a flow of pus, indicating a breaking down of tissues. Then the case must be fought vigorously, the treatment being by way of the fistulous opening instead of through the root-canal.

EDUCATE THE PUBLIC.

By McFerran Crow, D.D.S., Versailles, Ky. Read Before the Falls Cities Dental Club and Louisville Odontological Society, at Louisville, Dec. 17, 1898.

I am glad of this opportunity to put in a word for the dear public. We are so busy educating ourselves and each other that we overlook the fact that a great deal could be done to ameliorate our own suffering, and help the growth and widen the sphere of our profession by a little attention to this subject. By our own suffering I mean the pangs caused us every day at the gross ignorance exhibited by people around us; and owing to this ignorance they form the false ideas we hear so often about dentists and teeth. "Where ignorance is bliss, 'tis folly to be wise," but that does not apply here, for ignorance in this case means toothache, and that is not exactly bliss.

Take the parents of this country, the people who belong to the average class. Nine-tenths of them do not know a deciduous from a permanent molar, nor the order of eruption of the teeth, nor that permanent teeth begin to appear at six years and are liable to decay

and destruction. In fact, they are ignorant of or ignore everything, except the fact that when all the natural teeth are gone a new set can be had for ten dollars. What does this ignorance lead to?

First, their children have aching teeth, sleepless nights, distorted, nervous systems, bad digestion, weak stomachs, alveolar abscess, foul and fetid breath, and I believe when children are in this oral condition and the whole system is out of order, they are more susceptible to disease, such as diphtheria, scarlet fever, measles, etc. The results of this ignorance are most appalling when summed up. I might mention as a final result, a doctor's bill, which really ought to go to the dentist. We hear and see written much about the loss of the first molars and consequent contracted arch and irregular teeth. Time and again I have heard, "If we had only known it was a permanent tooth," but now it is too late.

This is a broad subject and one deserving much thought and study. How are we to get at people and enlighten them in regard to these things? Certainly the responsibility is ours. We are the custodians of the public health, so far as the teeth and mouth play a part. Do we then fulfill our duty when we accomplish our beautiful operations and pocket the fees? I believe it is our duty to not only preach at the chair, but in some way to reach out and tell those who are in distress that they can find relief. Especially ought we strive to reach the suffering children. Children of intelligent and well-to-do parents are often allowed to suffer all these ills. Think of your own children's teeth being allowed to get into the poor condition you see others in.

I have had a hobby for some time, and that is for us to reach children in the schools. Since I began to write this paper I saw this in the N[illegible]ber DIGEST about children's teeth: "The trustees of the p[illegible]school board at their November meeting discussed the poor teeth of pupils and proper remedies for the same. Immediate action was thought to be necessary and some steps will be taken to better the existing conditions." Here we have the same state of affairs, and no teacher can go deeply enough into the subject to help them any. The smattering of physiology taught in the schools does not open up the subject well, much less elucidate any facts. Suppose now this society were to appoint a committee to visit the school board and obtain permission to visit and examine each child's mouth—then suppose that committee should sum up the number of

open cavities, irregular teeth, deformed mouths, pus pockets, etc., in all the schools in this city, and explain in connection what the possible results will be, and publish it in the city papers. Don't you know it would be read and digested by the parents of these children? Then, to carry it further, have your committee suggest to the school board the appointment of a resident dentist in each district, to visit the schools and give plain, practical talks at stated intervals about the proper care of the teeth and everything necessary for the children to know. Young minds are very susceptible, and they would readily understand the situation, especially if told the calamities liable to follow the neglect of their teeth and mouths. These same children will soon be the parents of the community in their turn, and they would have the advantage, not only of better mouths of their own, but of being in a position to care for their own children. You see I am optimistic; I believe that the better side of human nature will assert itself if given a little encouragement and opportunity. This is our opportunity, and why not improve it?

The public generally have at last begun to realize that education is a good thing. We now have fine schools and teachers, which was not the case half a century ago. Especially in the cities have we most excellent school systems. The ground is already prepared for the seeds to be sown by us. We are trying every day to improve our methods and appliances for fighting disease and have made good progress. But why not do more to prevent disease, and improve the surroundings of the work we are compelled to perform and render it more lasting?

PERMANENCE OF REPLANTED TEETH.

By A. P. Nicholson, D.D.S., Edgerton, Wis. Read Before Southern Wisconsin Dental Association, at Janesville, May 3–4, 1899.

My experience in replanting teeth is very limited, but it may be of some interest to those who have had no personal experience as to the permanence of that class of work.

Case number one was a superior first molar, patient about twenty years old. The tooth was rather difficult to extract, its roots branching so that they dragged all the way out of their sockets. I suggested filling and replanting and he consented. I first prepared the tooth by removing the decay and contents of pulp-chamber and canals. After swabbing out canals with carbolic acid and thor-

oughly drying them I filled the roots with gutta-percha and the crown with amalgam. While doing this I protected the outside of roots with a clean napkin. I then dipped the roots in a 10 per cent solution of carbolic acid and glycerin and pushed the tooth back into its socket. It required considerable force to get it back, and hurt the patient a good deal. About two months later I asked him how his tooth was, and he said it had been very painful for a day and sore for two or three weeks, but after that he could use it as well as any tooth he had. Since then I have not met him. Case number two. A man about twenty-two years old presented for extraction a lower central which was quite sound, but with root badly abscessed. His chin and lip were much swollen and the tooth was very sensitive to touch in any way, and loose enough to pull out with one's fingers. I extracted it easily, finding the root flooded with pus. I washed it in clean water, wrapped the root in a clean napkin, drilled an opening into the pulp-chamber, and reamed out the pulp canal until I could force water through it readily with a syringe. After washing out with water and peroxid of hydrogen, I swabbed with oil of cassia, then dried and filled root with gutta-percha, syringed out socket with warm water, dipped root in carbolic acid solution and replaced in socket. In ten days time it seemed as good as ever and did good service for six years, when it fell out, the root having entirely disappeared.

Cases three and four were gentlemen aged respectively twenty-two and forty-two, the younger having a superior second bicuspid, and the elder having an inferior first molar operated on. I proceeded as in my first case, with the exception of filling the apex of bicuspid root with gold foil and swabbing canals with eugenol instead of carbolic acid. The older patient I saw frequently, and he always declared that the replanted tooth was the best one he had, but he invariably remarked that he would not go through the same experience again for a thousand dollars. The younger man told me a number of times that he wished all of his teeth were fixed in the same way, and as to its permanence the following extract from a letter from him will explain: "About twelve or fourteen years ago you extracted a bicuspid tooth, filled and replaced it for me. Some three weeks ago I had to extract it myself, as its roots were completely absorbed. It never gave me any trouble until this winter." This is practically the extent of my experience in replanting.

INTERSTATE COMITY IN DENTAL LEGISLATION.

CORRESPONDENT'S REPORT TO NEW YORK STATE SOCIETY. BY RODRIGUES OTTOLENGUI, M.D.S., NEW YORK. REPRINTED BY COURTESY OF THE COSMOS.

In seeking a subject about which to correspond with members of the profession, in order to obtain a basis for the usual correspondent's report, it has seemed to me that the one subject which at present interests the larger number of dentists throughout the country, and the one which is in most need of discussion and final settlement, is the question—"How best to unify the various state dental laws throughout the United States?"

The following is a copy of the letter which I sent to the secretaries of all the state examining boards in the country:

"My Dear Doctor: As correspondent of the New York State Society, it is my duty annually to present a report upon some feature of dental practice of vital interest to the whole profession. At the present time there seems nothing which will arouse more universal interest than a discussion of some method by which a uniform standard of education, or more especially of the granting of licenses, could be arranged throughout the state.

I send you herewith a copy of *Items of Interest* for February, in which you will find a paper on the subject by Prof. Kirk, and also a discussion. I would ask you also to read my editorial. Having done this, I would like you to send me, with permission to report it to my society, your own opinion, and if possible the opinion of your entire board, if it could be obtained at a meeting, as to the feasibility of either of the following methods:

First, the one suggested in the editorial—That applicants for licenses should be required to present the papers upon which they were examined at college when obtaining their diploma. The state board, upon being satisfied through these original examination papers that the applicant is worthy, to give him a license to practice; and, secondly, to accept a license of this character granted in similar manner by any other state.

Second Proposition—For all state boards, members of the National Association of Dental Examiners, to make use of identical examination papers, the same being prepared by a committee of the national body, licenses granted upon such examination papers to be interchangeable among the states represented in the national association.

Is it not a fact that without appealing to the legislature of your state your body is privileged to consider either of the above methods a satisfactory examination of the candidate? That is to say, is not the examination left to the determination of your board? In which case you will be at liberty to carry out either of the above propositions.

Lastly, in case neither of these would seem practical in your state, have you any alternate proposition whereby it would seem feasible, within an early period, to attain interchange of licenses between states?"

The replies received to date are as follows: District of Columbia. I have to state that, under the existing dental law of the District of Columbia, the board of dental examiners is required to grant license to all graduates of all dental colleges which give a three-year course of study, and to examine all other applicants, to test their qualification, both in theory and practice of dentistry, before granting license. We have a new bill before congress, and if enacted the board will have more latitude than it now has, especially in respect to interchange of licenses between states. In expressing my personal opinion upon the subject matter, will state that I fully indorse the suggestions made in your editorial, believing them a proper solution of the question.

C. W. APPLER, President, Washington, D. C.

New Jersey. It is with the greatest pleasure that I accept your courteous invitation to give my views on Prof. Kirk's paper and the ideas advanced by yourself in the discussion of the same, and in your editorial in the February *Items of Interest.* This subject has been one of grave consideration to me for a number of years, and I must allow that there are many alluring thoughts in both of the plans suggested, but unfortunately I cannot but see the other side of the picture.

As to the first suggestion it would have to be made absolutely sure that in no case could there be connivance between the college and the pupil. There may be dishonest colleges; another writer in the same issue of the *Items* suggests that there are, and that by the means you propose they will be forced to raise their standard. Admitting simply for the sake of argument that there may be some such dishonest colleges, what is the guarantee of the genuineness or originality of the answers to the college questions? If a professor in

a college would offer to sell to a student up for graduation the questions and answers of a state board before whom he had to appear, might he not be willing to dispose of the answers to his own questions for the benefit of his own school, if he thought its reputation in danger? And after all, would this method be as thorough an "examination of the college" as by the present means? What is the difference whether the applicant is rejected on the college questions or the board questions? Does it not reflect upon the institution in practically the same way?

As to the second suggestion, it is in my opinion theoretically most excellent but practically impossible, as I do not believe that any means could be devised to prevent the questions from becoming marketable before some of the state examinations, owing to the differences in the dates of the college commencements, as well as the meetings of the state boards.

Under the laws of New Jersey the manner of examining is left to the board, so that in answer to your question on this subject I would say if our board considered either of these suggestions practical, they could adopt it.

As to the lastly, of course we all have our ideas of Utopia, but then along comes the other fellow to show they are not practical. I have my ideas on this subject; I have talked them and written them for years. In the first place, strange as it may sound, I am opposed to examining boards: not to the boards themselves, understand, but the conditions which made such an imposition necessary. When a graduate receives his diploma, he should receive with it the right to practice anywhere under the Stars and Stripes, without let or hindrance from anyone.

How can this be accomplished? Let the final examinations for graduation in all colleges be conducted by a national board of examiners appointed by the government of the United States. A diploma issued under these circumstances would be universally received and the necessity of state boards abolished. This may be a long way off, but in my opinion it is the only safe and practical solution of the problem, and with a combined effort from the profession, colleges, and state boards, backed by the national associations, I believe it will succeed.

G. CARLETON BROWN, Secretary, Elizabeth, N. J.

Wisconsin. I have read Dr. Kirk's paper, also discussions,

together with your editorial, very carefully, and must say the more I read them, the more confused I become in regard to this burning question. It is one to which I have given much study and thought, and yet I cannot say that I have arrived at any definite conclusion. This board is a member of the National Association of Dental Examiners, and as such is in full sympathy with its work—that of raising the preliminary standard of colleges. To my mind that is the most important question at this moment. What dentistry needs to-day, above all things, is an educated body of men, and this can be accomplished only by insisting upon the colleges admitting only educated men. This they must do. The time has arrived for it. If they do not acquiesce willingly, then they must be either forced into line or else come to grief. This is the work of the national association, and this is the issue it is pushing with all its might and main. This board has taken a firm stand along this line, and is not recognizing diplomas from any college not on the recommended list. It has a bitter fight on its hands, but it is going to win. The national association having accomplished this, it will then, doubtless, take hold of the question of a "uniform standard of granting licenses throughout the states."

As our law requires us to grant licenses to all reputable graduates, we would not give you any suggestions as to the best manner of solving this question, so far as experience is concerned. I must say however, that your idea is worthy of much consideration, and I believe comes as near solving the question as any that has thus far been offered, although I most certainly dissent from your opinion as to "state boards being a necessary evil."

W. H. CARSON, Sec'y, Milwaukee, Wis.

Maryland. As there is considerable diversity of opinion as to the feasibility of the suggestions in your communication, I am authorized to use my own discretion in answering.

Your first suggestion is not perfectly clear to me. If you mean that a list of the questions used at the college examinations be submitted to the board, that could give us no idea of an applicant's status, and I am sure the college faculties would not allow inspection of answers.

The second suggestion, to have identical examination papers, would necessitate the holding of simultaneous examinations by the different state boards. If one board meets for examination one

week, and another board meets the following week, applicants might be enabled in some way to obtain a list of the questions.

Our law allows us considerable latitude, and any of the suggestions could be adopted if feasible. I am very sorry that we cannot give this matter more attention, but I assure you that our board is in entire sympathy with any project that will elevate the standard of dentistry. J. G. HEUISLER, Sec'y, Baltimore, Md.

Pennsylvania. It was impossible after your letter came into my hands to get our board together in time to obtain an expression of the body. To myself, personally, either of the two propositions would be satisfactory, except that the first would I fear remove the test very little away from the faculties of instruction. This you may deem an uncharitable view to take of it, but so long as men's wings have not sprouted safeguards appear necessary.

The use of identical questions, if feasible, would to my mind appear the most impartial. It would involve simultaneous examinations in all the states, just as two weeks ago we in this state held such in three separate places.

As I interpret our law, there would be no necessity for further legislation for the adoption of either proposition in our state.

H. GERHART, Sec'y, Lewisburg, Pa.

Illinois. I am not in position to express the sentiments of the board at this time, as our next meeting will convene on May 13. To express an individual opinion at this time will say, that considerable opportunity is afforded for discussion on either of the propositions presented. Both of the methods seem to have merit, and no doubt can be discussed at the national meeting.

J. H. SMYSER, Sec'y, Chicago, Ill.

South Carolina. In reply to your communication will say that our board does not meet again before the second Tuesday in July. Being a subscriber to *Items*, and holding the position I do on our board, of course I had already read carefully the articles referred to.

I would not object to your first suggestion, and do think if carried out honestly it would answer every purpose, but care should be taken that such papers be not tampered with by anyone. I have no objection to the second proposition, if the same care be taken to keep the questions well guarded by those who have the right to handle them.

It is a fact, according to my understanding, that our board has

discretionary power about examination, and could carry out the above propositions, if so desired.

You will notice that I seem particular about who should handle questions and examination papers. I have served on our state board over ten years now, and have some experience about stolen questions and other underhand methods about examinations. Our board is composed of graduates and has the reputation of being very strict, which may be the cause of my experience, and few members of the profession would believe the tricks employed by some to pass the examinations. Then again, if some of the questions and answers I have seen in print are samples of the examination papers where some of the colleges grant degrees, I should not like to trust those same professors too far. So I say, if honestly carried out your plan would be very well, but unless all parties who handle the papers can be trusted fully we may better stick to the old way.

J. R. THOMPSON, Sec'y, Newberry, S. C.

Indiana. As our board has not had a session since receiving your communication, what I have to say in reply represents my own ideas. But I know that these are shared in part by some of the other members of the board. Your first suggestion relative to applicants obtaining licenses upon the papers upon which their diplomas were granted is, I consider, a good one. At any rate it would afford a board a better opportunity of knowing more of the qualifications of the applicant. To this however, should be added a requirement of two days' practical work at the chair, and a license granted to applicant based on his standing in these. If the standing of state dental boards were uniform throughout the Union, then a license granted in our state should be respected in each and every state in the country. But such is not the case, for various reasons (in part, political) which cannot be discussed here. Even in a single state the competency of the various boards that come into power in a given number of years fluctuates.

Second suggestion, of state boards using identical examination questions prepared by a committee of the National Association of Dental Examiners, is good also, provided that examining boards meet at one and the same time throughout the country. This contemplates, of course, examining the product of our colleges. All this being equal, the better the material going into these institutions the better the product.

If such a thing as having all dental colleges equally competent to give instruction to their students were possible, then the quality of the material entering into those institutions would alone need to be considered, and to a large extent we would be satisfied with the general output. But different motives govern different colleges. The same to a little less extent we find true with state boards.

It has been suggested that the boards allow the colleges to accept any and all applicants and graduate whom they choose. That all state boards examine all applicants for dental licenses with questions prepared by a committee of the National Association of Dental Examiners. That the answers be sent from each state (members of the N. A. D. E.) to the committee having prepared the questions, they to examine and grade them, and on the committee's markings the state board to either refuse or grant registrative certificate or license.

Our last state legislature passed laws giving the board greater power, and enables us to examine any or all applicants for license. I will send you a copy of the laws.

M. A. MASON, Sec'y, Ft. Wayne, Ind.

Louisiana. Your first proposition about the granting of licenses to an applicant upon his original college examination papers, seems to me to be a very fair and just one, provided the said papers could be had direct from the colleges in an untampered condition. Your second proposition meets with my hearty approval and I hope soon to see the day when such a rule will be in force. Third, yes.

C. V. VIGNES, Sec'y, New Orleans, La.

Maine. In regard to your inquiries concerning the granting and interchange of licenses, etc., I reply briefly as follows: Members of our board are unanimous in the opinion that some change is desirable, but they are not agreed as to the practicability of any plan. We have had no meeting, but I have obtained an expression from all our members except one, and the second proposition as stated in your letter is regarded with favor, but one is not prepared to favor interchange of certificates.

I believe that it is the privilege of the board to consider and adopt any of the propositions given. I have not at present any proposition to make. D. W. FELLOWS, Sec'y, Portland, Me.

New Mexico. Your first proposition if adopted as a whole would

defeat the very object for which it is proposed. Without going into the merits of the first clause, and admitting the desirability of its intent, it would be null and void if the second clause were adopted, for this reason: Immediately upon the graduation of a student he would present his papers to the local board, receive his license, and the same would be accepted by all other boards as satisfactory. In place of this proposition, it seems to us that the plan adopted by the National Association of Dental Examiners is far preferable. Let each state board have jurisdiction over the local colleges, enforce rules similar to those insisted upon by the national association, seek means to compel their observance, and when the school comes up to the standard thus established, let all other boards accept the diploma as fully meeting their requirements and issue a license without further delay. This rule of the national association is strictly enforced by this board, which is given such power by our law, and is found in practice to be equitable and just. We have had numerous applications from graduates of colleges not recognized by the national association, who, when notified that we could not give them a license under our law, have quietly departed without further trouble. The board and the profession generally are much gratified at this provision of our law. We are therefore of the opinion that proposition No. 1 is not feasible.

The second proposition meets with our hearty commendation. We will be glad to see such a provision adopted. It is a fact that, without appeal to the legislature of our territory, either of the methods would be considered a satisfactory examination. The examination is left entirely to the discretion of the board. The suggestion given above seems to us, after six years' practical experience in state board work, to be nearer our ideas in regard to the interchange of licenses between the states than any method yet proposed.

D. W. MANLEY, Sec'y, Santa Fe, N. M.

Kentucky. In regard to dental legislation, it seems to me that some of us have never comprehended that dental laws are police regulations, intended for the protection of the people and for that alone. The state cares nothing about protecting dentists from competition, but it cares a great deal about protecting the public from incompetent dentists. Nor does the state care where or how a dentist gets his education, provided only that he has sufficient train-

ing not to prove dangerous to the community. Accordingly in Kentucky the legislature has constructed the state board of dental examiners, solely for the purpose of protecting the citizens against incompetent dentists.

The law provides that no one shall practice dentistry in this state without a certificate of qualification from said board, and that the evidence by which he may establish that he possesses sufficient learning and skill to entitle him to a certificate shall be either such a diploma as proves the possession of the necessary attainments, or in the absence of such a diploma the standing of an examination by the applicant by which he gives evidence of this fitness. In a word, no one can practice without a certificate from the board, and this can be secured by means of a diploma or an examination and in no other way.

The board deals wholly with individuals, and passes on the qualification of each individual applicant, as evidenced by his diploma or examination. The board owes no duties to any college as a college; though if the college maintains a standard of sufficient grade its graduates are entitled to certificates upon presenting and filing their diplomas; but this is true because and only because the diplomas taken as evidence satisfy the board that the parties holding them possess such knowledge and skill that they can safely be turned loose on the public. The board has no authority to require the applicant to produce his examination papers, and no right to issue any certificate on them; nor has the board any right to recognize "licenses" granted by other states. Of course, a law might be passed authorizing the Kentucky board to recognize licenses granted by other states, but the board should not do so without such a law.

The prevailing notion that dental legislation is enacted, 1st, for the protection of the dentist from competition, and 2d, for the protection and benefit of the colleges, seems to me to be fraught with great danger to the cause of dental education. The protection of the people from incompetency is and ought to be the only ground on which such legislation can be maintained. The great trouble in enacting satisfactory dental laws is the fact that a large majority of the people, both in and out of the calling, have no just conception of the scope of such laws. We need education along these lines. Of course, if a uniform law could be passed by all of the states it would

be very desirable, but when we think of the difficulties in the way it is an undertaking from which we may well shrink. We would first have to agree on what ideal law was, and then have it passed by all of the states exactly as agreed upon. To anyone who has had experience in trying to influence legislation this proposition is absurd; the whole plan to my mind is simply impossible of accomplishment.

As to the proposition to have a national law regulating the whole matter, the advocates of such a plan evidently have no appreciation of the basis on which this government is formed. As mentioned in another part of this letter, all laws concerning the health of the people of the states come under the head of "police regulations;" these regulations begin and end with the state and cannot be made a matter of national law. J. H. BALDWIN, Sec'y, Louisville, Ky.

Vermont. The idea of having an applicant for a license to practice dentistry in any state present the examination papers upon which he was examined in college is a good one, still this has its drawbacks, for it is a fact that quite a number of students are graduated each year and from our best colleges who are not qualified to practice dentistry. Where there are so many students it is impossible for the college instructors to watch every one while doing the work required of them. For instance, a student who has been a laboratory worker for several years told me that during the past winter he earned enough to pay nearly half of his expenses by helping fellow students do their depositing and practical cases required by the college. In mentioning this I do not intend it as an attack on the colleges—far from that; but to show that some students manage to evade the requirements of the colleges.

2d—I cannot favor the idea of having an identical list of questions gotten up by a committee of any association, for the reason that the various state boards hold their examinations at different times. An applicant might be refused a license in one state, and being familiar with the list of questions, could go to another state and pass the examination. I would favor such a committee making up examination papers that would be uniform, but different questions for each state. Here in New England we have an association of dental examiners, and we are trying to make our examinations uniform and to get uniform laws, that we may accept licenses from other states in place of an examination. I would like to see this done by all the states in the Union.

Our law says, "shall at its meetings examine applicants, etc." If a license is given without examination we are discriminating. Law does not allow anyone to discriminate. When the time comes for the recognition of licenses from other states an amendment to the law, giving the board authority to accept a license from another state in place of examination, can be easily obtained.

I hail the time when all states shall have such uniform laws and examinations that the interchange of licenses may be brought about without doing an injustice to anyone — colleges, examining boards, practitioners or patients.

GEO. F. CHENEY, Sec'y, St. Johnsbury, Vt.

Virginia. In regard to your first proposition, I believe that such a method of examining candidates for state license would tend to encourage some colleges to fraudulent acts, and would tie the hands of the examiners, so that it would be impossible to stop it. I do not mean to say that all or even a large per cent of the colleges would take undue advantage of the examiners, but if even one did that would be argument enough against the plans. This proposition carried to its last analysis is the same thing as registering diplomas straight out; the only difference is that one method has red tape and the other has not.

Your second proposition is a good one, but at this time I do not think it could be put into practice without arousing political influences that would in some cases injure the usefulness of the board for years, and delay the interchange of licenses for some time to come. If this plan of examining candidates could be put in practice we would not be far from interchange of licenses.

There is nothing in the Virginia law that would prevent a board of examiners from accepting either of the propositions mentioned. I regret I cannot offer an alternate proposition to obtain interchange of licenses between states. An unrestricted interchange of licenses between states in my opinion would not be desirable. An interchange whereby worthy and competent men could practice anywhere in the United States is desirable, and I would be glad to see the consummation of the plan by which this could be brought about. It will require time, careful thought, and considerable work to perfect a plan whereby justice can be done in the matter of interchange between states. Any plan should be thoroughly safe-guarded against incompetent men. H. W. CAMPBELL, Sec'y, Suffolk, Va.

Massachusetts. Personally I have been pleased to read the advice, opinions and suggestions in the journal at your request. At present I could not endorse either of the propositions contained in your letter as being at all feasible or practical.

Our board has long been interested in his matter, but realize that the attainment of even a portion of what is desired will require a long time. Legislative changes are not easily obtained everywhere—then we should not think it possible that the dental schools would consent to have their examination papers taken all about the country to be examined by a state board at any and all times—whenever a man desired to locate in its territory. Do not also think it feasible, for a time, to have the examination throughout the country on the same day, and the issuing of questions left to the National Association of Dental Examiners.

Our board two years ago organized, with the other New England boards, an association for the purposes under discussion; we have held profitable meetings, and attained as much, I think, as we could in our work here. I think it is in evidence we can attain the objects the two propositions aim at, but in a comparatively slow manner; it will require a long time. The schools must be of even excellence, the boards of examiners must have the same standard, and provision must be made to examine a candidate even if he has not attended a dental school. G. E. MITCHELL, Sec'y, Haverhill, Mass.

It is the unanimous opinion of the Massachusetts Board of Dental Examiners that your first suggestion is impossible, for the reason that our twelve years' experience as an examining board has taught us that many of the young men who appear before us, recent graduates from reputable colleges, have utterly failed to pass our examinations, and are in our opinion incompetent to practice dentistry.

Your second proposition also seems to us very impracticable. It would necessitate examinations being held everywhere on the same day, which is not feasible, and would allow too much concentration of power in a few individuals.

Our New England Association of Dental Examiners was organized with a view of bringing about in New England what seems to us the only practical way to interchange certificates, namely, a uniformity of legislation and uniform standard of qualification. Though we have been in existence but two years I feel we have

made respectable progress; already two laws have been changed to harmonize with Massachusetts, and when those who are a little lax come into line we hope to form a perfect law for New England.

J. F. DOWSLEY, Boston, Mass.

New York. Without going into discussion I would say in regard to your first proposition, if all men were honest, if all were half as anxious to elevate the profession as they are to fill their pockets, this plan offers great inducements; but so long as the ungodly are in power, so long as colleges are run on a money-making basis, so long as there is a handsome surplus to divide among the favored few each year, I fear that plan would not be reliable.

Second Proposition—The first thing should be a uniform standard for matriculation, and this should not be a farce but be placed high enough so that our eyes and ears will not be constantly shocked by bad chirography and worse grammar. If you could sit with an examining board for one season and see the time consumed by trying to read writing that would make a Chinaman turn green with envy, grammar that is execrable, and spelling that gave you "bad spells," you would think and say at once, "For heaven's sake, make the standard high enough that the people be not shocked by such display of ignorance." This may seem overdrawn, but quite a percentage of that class come up every year, and it is needless to say they do not favor raising the standard. For our state we have settled upon a full high-school course as a prerequisite for matriculation; this insures a fair English education. Let the other states adopt the same standard, or one equally as good, and we are all on a par to start with.

Then let a committee be appointed by the National Association, National Association of Examiners, state societies or by such power as may be deemed best, to formulate questions for examination. Let all state boards adopt these questions and we have a uniform examination throughout the states, and a license in one state would be equally good in another. Of course the applicant must have taken his degree in regular form.

I think the New York State Board of Dental Examiners, in connection with the Regents of the University, have full power without further legislation to adopt any method of examination which may be deemed best for the elevation of the dental profession.

FRANK FRENCH, Sec'y, Rochester, N. Y.

West Virginia. None of the members of the board seemed to altogether approve of either the first or second proposition. There is such a different standard of qualification in different sections of the country that it is very difficult to fix one to suit all. What might suit the standard of West Virginia may be very far from the standard of New York or Boston. Colleges in different parts of the country are turning out handsomely finished, full-fledged, first-class dentists by the hundred—yes, by the thousands—with beautifully finished diplomas, on which very few are able to read anything except their own names. Many of them are as well qualified to practice dentistry as a hog to teach Latin. Some are bright boys and probably good mechanics, so after some practice and experience they may make good mechanical dentists.

We think as a board we have the right to determine the qualifications, and decide the question whether or not the candidates are qualified and fit to practice dentistry in our section of the country. A board of dental examiners in Boston, and possibly in New York, might give their noses a celestial turn if a West Virginia board should attempt to dictate to them what sort of an examination they should give their candidates.

It certainly would be a great convenience if some universal law could be made that would suit all the different states. I have not gray matter enough to work out so important a question. It is a problem requiring the head of an experienced legislator. We think we are all practical men, and would be pleased to vote for anything that seems feasible, and would be glad to have some universal law that would make one examination do for all the different states.

CHAS. H. BARTLETT, President, Parkersburg, W. Va.

North Carolina. I am convinced that we need a uniform standard of education. Either of your plans would accomplish the purpose, but my preference would be for the second proposition. I think that under the law of this state the examination is left to the determination of our board, and we would be at liberty to carry out either of the propositions.

R. H. JONES, Sec'y, Winston, N. C.

Florida. I am of the opinion that the second proposition suggested is the more desirable. I think it should not be limited though to boards which are members of the national association. I do not believe in making it compulsory for boards of separate

states to join the association. Think it is a step in the right direction. R A. SHINE, Sec'y, Tallahassee, Fla.

North Dakota. In regard to the proposition that state boards should issue a license upon presentation of the diploma and the original college examination papers as guarantee of the knowledge of the applicant for examination I would say, that it seems to me that this is almost an impossibility, and in fact would be so in many cases, especially the men who are now graduates and who cannot obtain papers written by them when in college, and even if they could secure their old individual examination papers, it is a question whether they would be of such character as to meet with the approval of the state boards at the present time.

The suggestion that the state boards agree to a definite examination by questions issued by a committee of the National Association of Dental Examiners I think is the only fair solution of the question—with this proviso—that where it is possible the state boards agree to the same date for the examination in the different states, say during January and July of each year, and within if possible the same week of these months, at which time all applicants for examination should be given the questions as issued from said committee. These questions to be furnished to the state boards in such manner that no knowledge of them could be obtained by any person or persons who are to be examined. Papers written by parties examined under these conditions to become a part of the evidence of their ability as dental practitioners. These papers with a license from any state board issued under the above conditions to be accepted by all other state boards agreeing or being parties to this agreement. This arrangement would allow the practitioner to take the state board examinations at any of these semi-annual meetings, and after having once passed any state board on the National Association of Dental Examiners' questions, he would at any time be eligible for license in any other state agreeing to this arrangement.

I think the greater part of the state boards which are members of the national association would permit of this arrangement, and would change the date of their meetings so that we could have a uniform date, say the second week in July and January, at which time all state boards would hold a meeting, and each and every applicant for license would be compelled to have the same examination, thereby showing no favoritism of politics to any candidate.

It is almost impossible for state boards to agree to accept the diplomas without question from any college. Mistakes will happen and men go through by some method or other, who are thoroughly unfit to practice dentistry or anything else.

The North Dakota Board finds the only successful rule, "To examine all candidates without discrimination as to college or other conditions." After some eight or ten years knowledge of the board's workings, I believe that this is the only one fair method of arriving at the definite understanding of the knowledge of the applicant for license. In fact, we have had to turn down men from some of the best colleges, while others from colleges of less note have proven in every way, so far as examination would demonstrate, much better prepared for practice. H. L. STARLING, Sec'y, Fargo, N. D.

Washington. Our board has had no meeting recently, and I therefore cannot send you the opinion of this board regarding interchangeable licenses. My own judgment is that the second proposition would come nearest to being practical in its workings. Our law defines thirteen branches, including practical demonstration of ability, that the applicant must pass in. If these were covered by an examination in another state, it might be legal to consider this a satisfactory examination, but of course this is a point purely to be decided by the board. W. E. BURKHART, Tacoma, Wash.

Utah. In regard to suggestion No. 1, the idea of having applicants present to state boards their original papers upon which they were examined is to me commendable, in so far as it assists the dental board, but the granting of a license upon said papers and the interchange of licenses granted upon such evidence of ability, would never meet with my approval.

Suggestion No. 2—State board making use of identical examination papers; this is commendable, provided however, they be the original papers and not made interchangeable; your method however, would meet with no opposition from our legislative body because our laws are founded upon findings from the National Association of Dental Examiners.

I have no proposition to make in regard to making licenses interchangeable, for it will certainly meet with opposition here.

GEO. E. ELLERBECK, Sec'y, Salt Lake City, Utah.

Thus we have before us in concrete form an expression of opinion from twenty-one examining boards, a summary of which brings out

some very important facts, not the least of which is the fear that dishonesty would militate against any proposition. Five states, apparently speaking from experience, suggest that dishonesty is traceable to the colleges direct, while some believe that the greatest care is requisite to prevent fraudulent possession of examination questions by applicants for license. If these accusations are well founded, it is a serious blot upon the honor of those in charge of our educational system. Further consideration of this feature is not requisite here, as we are merely seeking to achieve interchange of license, and if there be dishonesty licenses should not be procurable even in one state.

To those who have believed that an interchange of license is a dream of Utopia, the present series of letters must prove as encouraging as they will be surprising. Two propositions were considered. The first provides that the candidate shall present his college examination papers, which shall entitle him to a license, if satisfactory to the examining board. To this proposition four states assent, viz., District of Columbia, South Carolina, Indiana and Louisiana, while five others approve the scheme though doubting its possible enactment. These are Wisconsin, Pennsylvania, Illinois, Vermont and North Carolina. Maine, Washington and Florida merely express a preference for the alternate proposition, so that their vote is neither for nor against. Nine states, however, oppose the idea, these being New Jersey, New Mexico, Kentucky, Virginia, Massachusetts, New York, West Virginia, North Dakota and Utah.

There being nine states that oppose the proposition and only nine in favor of it, the majority of which latter are doubtful, we may dismiss the idea as untenable, especially as its perfect operation would require the cooperation of the colleges, which could be procured, but only by force. Many of the objections which have been made can be answered, several being due to misapprehension of the scheme, but as we abandon the idea it is futile to waste time in further discussion.

The second proposition has met with such a reception that it merits our most studious and earnest consideration. Fourteen states approve the plan, only three being opposed. Of the others two failed to approve merely because they preferred the first proposition; they would certainly accede to the second. Another, New

Jersey, thinks the scheme excellent but impracticable, while a fourth, Vermont, opposes only the feature of identical questions and suggests a modification which could well be adopted. Thus three states oppose, Kentucky, Massachusetts and West Virginia, while seventeen indorse the idea, these being District of Columbia, New Jersey, Wisconsin, Pennsylvania, Illinois, South Carolina, Indiana, Louisiana, New Mexico, Virginia, Vermont, New York, North Carolina, Florida, Washington, North Dakota and Utah.

The next matter of moment is the third question, whether the examining boards being willing to adopt the plan, have they the legal power? Every state admits that such power exists without further legislation, except Kentucky and Vermont, but we are informed that in Vermont an amendment permitting interchange of license on an equable basis could be obtained.

The greatest difficulty in connection with all schemes heretofore proposed has been the impossibility of obtaining further legislation throughout the states. I am exceedingly proud to have evolved a method, agreeable to the examiners of seventeen states, which can be put into operation without special legislation; a plan therefore within the scope of existing laws, and for that reason worthy, I think, of adoption and trial for a time at least.

Certain objections have been brought out, but these can certainly be met. The greatest trouble seems to be that in order to avoid dishonesty it would be requisite that the examinations should be held simultaneously. One correspondent says this is impossible, but he does not explain why. So far as the examiners are concerned, they certainly should be able to adopt any date agreeable to the majority of those coming into the agreement. The only difficulty which occurs to me is to be that students of some college would be compelled to lose some months after graduation before license could be obtained. But this only adds a brief period to their studentship at worst, and if this were thought to be inequitable such graduates might be permitted to practice undisturbed until the date of the first examination after their graduation. If the examinations were held semi-annually, this would be but a brief period.

The correspondent from Vermont objects to identical examination questions for all states, and suggests a single committee authorized to arrange the questions, but having power to promulgate separate questions for different states.

After due consideration of all the letters received I have the honor to suggest the following, as a solution of the vexed problem: First—That a single national committee shall arrange the examination questions for use by the state examining boards, and that license granted by one state, a party to this agreement, shall entitle the holder to practice in any of the states so agreeing. Second—That identical questions shall be used by those states which could hold examinations simultaneously, but that the committee shall provide separate sets of questions, of equal grade, for such states as cannot agree to simultaneous examinations. Third—Each state board, in addition to using the national committee's questions for the theoretical examinations, shall conduct a practical examination, the successful candidate however, not being compelled to pass another such examination when presenting his license to another state. Fourth. That each state party to this agreement shall pay a stated fee for its set of questions, the fee being higher where special questions are provided, the sum thus raised to be a remuneration to the committee for the arduous labors which would be entailed by this plan.

This ends my report, but before closing I beg that the opportunity now afforded of inaugurating a movement which may bring us a solution of this problem be not lost. May I ask the society to take some definite action upon the proposition here expounded? If the final plan here set forth seems adequate, will the society so vote, and so voting will they send a communication upon the subject to the National Association of Dental Examiners and to our National Association, urging a trial of the plan?

To Remove Blood From the Hands.—When you have blood upon your hands, first wash them in pure water. Using soap at first is a mistake, as soapy water does not dissolve blood rapidly. Clear water and a nail-brush should come first, soap next.—*International Jour. of Surg.*

Pastilles for Fetor of the Breath.—This formula is given in the *Journal de Med. de Paris.*

℞ Powdered coffee, 45 parts.
Vegetable charcoal,
Powdered sugar,
Vanilla, of each, 15 parts.
Mucilage of gum arabic, a sufficiency.

M. Divide into pastilles of fifteen grains each. Five or six to be chewed daily.—*N. Y. Med. Jour.*

Digests.

TO ABORT A COLD. Max Nassauer asserts that an incipient cold in the head can be checked every time if the nose is thoroughly rinsed out with a weak solution of potassium permanganate, which seems to have a specific action upon the germs causing the trouble. He claims that the public will have a higher respect for the profession when it is proved that colds can be successfully aborted by following the physician's directions. He checks colds in the first hour or so and thus escapes all the catarrhal and bronchial annoyance that follows in their train, by having a strong solution of potassium permanganate on hand, about what can be taken up on the tip of a small knife, to half a liter water. A few drops of this strong solution are added to warm water until it is colored a pale pink. After blowing the nose vigorously, both nostrils are rinsed out well with this weak solution, allowing the fluid to run out through the mouth. Each nostril is then wiped out with cotton on the finger to mechanically remove all remaining germs. A small dry plug of cotton is then pushed well up into each nostril and the nostrils filled with the weak solution, with the head held back, allowing the cotton to soak it up. The cotton is left undisturbed for about an hour, for the warmth and moisture to produce their effect, when the plugs are expelled by blowing the nose. Even an established cold is favorably influenced by this treatment, but is most effective when the sneezing, and increased secretions announce the advent of the cold, which is a highly contagious affection.—*Klin. Therap. Woch.*

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"ABSORPTION AREAS" AND PULP NODULES. By Sam'l P. Cowardin, F.R.M.S. Read before Southern Branch National Dental Association, Feb. 9-13, 1899. In making a very large number of sections in his microscopic work, not less than 3,000 human teeth having been carefully inspected, three teeth have been found by the author containing *large* absorption areas. In one case of these teeth (which was submitted for inspection) there is on the outer surface a seeming plug of cement-like substance which seems to fill the point from which the tooth was attacked, the partly refilled absorption and connects with the cementum and not with the pulp. In these three cases some considerable part of the dentin is absorbed, but in quite

a good many cases, probably fifty or sixty, the author has found minute "absorption areas," and has observed that whenever he cuts an old tooth, which shows a heavy coat of cementum with evidence of abscess, there is more or less of absorption area. The author suggests the desirability of an investigation as to what proportion of normal teeth contain pulp stones. Many of the teeth used by the author have probably been extracted for purposes of regulating or inserting artificial dentures, and in these apparently normal teeth he finds pulp stones very common—probably in 66 per cent. The author's observations lead him to conclude that in fully developed teeth, and certainly in old ones, it is rare that a pulp is entirely free from these nodules. Hence he doubts if they are so generally a source of the serious trouble attributed to them by many writers.—*Ohio Journal, June, 1899.*

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EXPERT EVIDENCE. "Mr. Dooley," whose reflections and observations, humorous and pathetic, have recently received the attention of the reading public, has passed upon expert evidence, and his account of a murder trial has been accepted by a contemporary as "a very fair exposition of the absurdity of our judicial system."

The *Annals* has already presented several communications upon expert evidence, and leaves its readers to determine the fidelity to fact of the following: "Profissor," says th' lawyer f'r th' state, "I put it to ye if a wooden vat three hundhred an' sixty feet long, twenty-eight feet deep, an' sivinty-five feet wide, an' if three hundhred pounds iv caustic soda boiled, an' if th' leg iv a guinea pig, an' ye said yestherdah about bicarbonate iv soda, an' if it washes up an' washes over, an' th' slimy, slippery stuff, an' if a false tooth or a lock iv hair or a jawbone or a goluf ball across th' celler eleven feet nine inches—that is, two inches this way an' five gallons that?" "I agree with ye intirely," says th' profissor. "I made lab'ratory experiments in an ir'n basin, with bichlorid iv gool, which I will call soup-stock, an' coaltar, which I will call ir'n filings. I mixed th' two over a hot fire, an' left it in a cool place to harden. I thin packed it in ice, which I will call glue, an' rock-salt, which I will call fried eggs, an' obtained a dark, queer solution that is a cure f'r freckels, which I will call antimony or doughnuts or anything I blamed please."

"But," says th' lawyer f'r th' state, "measurin' th' vat with gas —an' I lave it to ye whether this is not th' on'y fair test—an' supposin' that two feet acrost is akel to tin feet sideways, an' supposin' that a thick green an' hard substance, an' I daresay it wud; an' supposin' you may, takin' into account th' measuremints—twelve be eight—th' vat bein' wound with twine six inches fr'm th' handle an' rub iv th' green, thin ar-re not human teeth often found in counthry sausage?" "In th' winter," says the profissor. "But th' sisymoid bone is sometimes seen in th' fut, sometimes worn as a watch-charm. I took two sisymoid bones, which I will call poker dice, an' shook thim together in a cylinder, which I will call Fido, poored in a can iv milk, which I will call gum arabic, took two pounds iv rough on rats, which I rayfuse to call; but th' raysult is th' same." Question be th' coort: "Different?" Answer: "Yis!" Th' coort: "Th' same?" Be Misthur McEwen: "Whose bones?" Answer: "Yis." Be Misthur Vincent: "Will ye go to th' divvle?" Answer: "It dissolves th' hair."—*Albany Medical Annals.*

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POLITICAL INFLUENZA IN CHICAGO. To be answered by all applicants for the position of interne at the Cook County Hospital: 1. In disabling an enemy of good government at a primary election which blow is preferable, one on the inferior maxillary or one in the solar plexus? 2. Before pulling a leg, is it necessary to administer an anesthetic? 3. What is a joint? Give the location of a hop joint. 4. Which is the more nourishing food for convalescents, weiss beer or mixed ale? 5. If you find a gentleman of respectable appearance, with money and jewelry, lying unconscious in the street, and there happens to be no one at hand to assist you, what would be the first thing to do? 6. According to the laws of hygiene, what is the correct poultice for a Frankfurter sausage—mustard or horse-radish? 7. In dressing up an easy mark, is it advisable to use splints? 8. What is the best brand of knock-out drops? How should they be administered? 9. (*a*) What has been your experience in the use of instruments? (*b*) Which is more highly endorsed by modern practice, a razor or the knucks? 10. (*a*) In which school of medicine did you receive your early training, the Republican or Democratic? (*b*) Did you ever study under "Doc." Jamieson? 11. Describe the following parts of the human system (*a*) the coco, (*b*) the lamps, (*c*) the listeners, (*d*) the beak,

(*e*) the slats, (*f*) the mit. 12. Is St. Louis beer an antiseptic. 13. (*a*) Would you exert yourself to save a man's life if you knew that as soon as he recovered he would go out and vote against the party of good government? (*b*) Why not? 14. Are you in favor of the eight-hour day for typhoid patients? 15. Have you studied anatomy? If so, what is Robert J. Fitzsimmons' chest measurement? Also, describe the present state of Kid McCoy's knuckles. 16. Give the chemical name of the following drug compounds, to wit: Ice, Simple syrup, Angostura bitters, One jigger of booze, Ditto of Vermouth, One cherry. 17. In nursing, is it advisable to have both of the object balls against the cushion? 18. While working and shaking down a candidate for the purpose of compelling him to cough up, do you favor a plain massage or the Swedish movement? 19. Give three reasons why the county hospital should be closed on election day? 20. Which brings an eye around sooner, a raw oyster or a piece of steak? Have you ever tried painting? 21. What is the meaning of the surgical expression, "To shoot the hot air into his nobs?" 22. In dissecting a live subject, where would you begin to carve? 23. (*a*) Name three kinds of medicine. (*b*) Should water be taken afterward? 24. (*a*) Can a patient who has died during the preceding summer register and vote at a spring election. (*b*) Explain how. 25. At post-mortem examinations, who is entitled to the gold in the teeth?—*Medical Fortnightly.*

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EXTRA TOUGH GOLD SOLDER. By Dr. H. C. Meriam, Salem, Mass. It is desirable to avoid uncertain formulæ in the making of plate or solder. We used to see formulæ that called for the addition of a certain proportion of brass wire or brass pins. Now brass and brass wire vary, and we can work best if we start with each metal pure and distinct. A very small portion of some metals will make gold intractable. I remember that I once took some gold—old fillings—to be made into pure gold wire, and my man complained that it worked "short." The action of metals in contact in a state of fine division is an interesting one, but too long for this report; but when we learn that one part of tin in a thousand will make gold too brittle to work, we can understand the importance of what I allude to. We use tin constantly in filling, either by itself or in combination with gold, and I think that none of us would overlook this source of danger in making plate or solder, but I think we have

not thought of tin in amalgam; a very small part, even that in an amalgam repair of a gold filling, might ruin the working of plate or solder. I direct my maker to treat all my gold with corrosive sublimate for the removal of tin. The pennyweight is taken as a starting-point and divided into this formula:

	Gold.	Silver.	Copper.	Zinc.
Plate.....	18 gr.	5 gr.	1 gr.	o gr.—24 gr.
Solder.....	18 gr.	3½ gr.	1 gr.	2 gr.—24½ gr.

You see by this that a portion of the silver is withheld and zinc added to make the melting-point of the solder lower than that of the plate, and that there can be but slight difference in color between them. The slight quantity of copper helps to toughen the solder, and deepens the color of the plate; a lighter-colored plate and a very free flowing solder are made by omitting the copper and adding an equal amount of silver. But the underlying rule of pure metals, and lowering the melting point of the solder by withholding part of one metal and adding an equal part of another of the same color but of a low melting point, such as zinc, will allow us to make a plate and solder of any carat that will work well together. You perhaps noticed that the parts given for the solder foot up twenty-four and one-half grains; an excess of zinc is added to allow for loss in melting and in soldering.

In the work that I show you the bands are made of this plate, reinforced and soldered with solder made by this formula. One side is not polished, and you can see where the solder has flowed; the polished side shows the colors of the plate and solder and the excellence of the match. You will notice the pieces of plate and solder that are now being passed around, and can judge of the color and test the toughness of the solder. You will see that the solder is rolled very thin. I like this for convenience in use and it cannot be mistaken for plate in the office. I have 20 dwt. made up at a time, and if of same thickness they might get mixed.—*International.*

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STERILIZATION IN DENTAL PRACTICE. By T. C. Van Kirk, D.D.S., Allegheny, Pa. Abstract of Paper Read Before Odontological Society of Western Pennsylvania, at Pittsburg, March 14, 1899. Sterilization may be defined as the process of destroying all spores and germs, with a view to preventing the development of bacterial or other organisms. To the surgeon it is no

only important to destroy all germs which may have found lodgment on the instruments and appliances employed in his operations, in order to prevent the infection of his patient by pathogenic organisms, but also to be scrupulously careful after the operation to prevent their admission or inhibit their growth by the use of antiseptic dressings; in other words, complete sterilization is the *sine qua non* of the careful surgeon of the present day.

The importance of or necessity for sterilization implies the probable presence of pathogenic bacteria in all cases operated upon. Miller has demonstrated that there are twenty-two mouth bacteria; of these eight or ten are almost constantly met with, and six are invariably present. Besides these mouth bacteria, nearly all of which are non-pathogenic, almost every minute organism which has been described as growing in any position has been found in the mouth. In other words, the mouth is a typical incubating chamber for the culture of almost all germs. During epidemics or when persons come in contact with those suffering from various zymotic diseases the organisms associated with them are frequently taken into the mouth.

Surgeon-General Sternberg, of the United States Army, an eminent authority on bacteriology, states that he has found the pneumococcus constantly present in his own mouth, and that he has repeatedly caused pneumonia, followed by death, in rabbits by injecting them with the saliva taken from his mouth when in a state of perfect health.

Numerous authorities might be quoted substantiating the foregoing statements, but time will not permit. I have thus shown that even in the most healthy mouths, to say nothing of those contaminated with disease, such as tuberculosis, erysipelas, syphilis, etc., there may be present microorganisms which, becoming attached to our instruments, may by accident or otherwise be introduced into the system of the patient himself or of some succeeding patient, or even of the operator, with calamitous results.

Muir and Ritchie in their Manual of Bacteriology say that all bacteria can be killed either by heat, drying, starvation, or by chemical agents; of these, chemical agents, commonly called germicides, are most frequently used. As a general rule the two agents which heretofore have most frequently been used are a 1 to 20 solution of carbolic acid, and a 1 to 1,000 solution of bichlorid of

mercury. But these do not meet all the requirements of a sterilizing agent for a dental office, not only because of the time required in some cases for complete sterilization, but because of the corrosive action on steel instruments, and because some articles would be destroyed by being immersed in these solutions. .Many have therefore taken advantage of the principle that all bacteria are destroyed by heat, and have advocated this method of sterilization. This again presents disadvantages to the dentist, as the high temperature necessary to kill the spores of some bacilli injures the temper of delicate steel instruments.

The hands of the operator should be washed and disinfected after each operation, not as an act of cleanliness merely, but as a safeguard for himself and succeeding patient against possible infection from a previous patient.

My own method after washing is to apply to the hands a small quantity of borolyptol, allowing it to dry upon the skin. The mouth of the patient may be rendered practically sterile by the use of some one of the many good antiseptics that are now available. Of these borolyptol is coming into popular favor. A small quantity held in the mouth for a few minutes arrests the growth of the microorganisms. Tubes of agar agar planted with saliva from the mouth, after exposure to borolyptol showed no growth after forty-eight hours incubation, while tubes inoculated from the same mouth before the application just stated gave abundant growth, thus showing that borolyptol has at least the power of inhibiting the growth of mouth bacteria.

With regard to borolyptol, I think it might be safely used for sterilizing instruments, as only a slight tarnish was formed on steel instruments immersed in it for thirty-six hours, but this is longer than is necessary to accomplish sterilization; half an hour's exposure produced no tarnish whatever.—*Dental Brief, May, 1899.*

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TREATMENT OF IMPACTED THIRD MOLAR. By J. R. Bell, D.D.S., Cleveland. Read before Cleveland Dental Society, Feb. 1899. I beg leave to call your attention to the local and systemic disturbance often caused by the eruption of the third molar and to a radical treatment for immediate relief and cure. We often find a chain of symptoms arising in cases of this nature, which if not relieved become annoying. The first symptom is usually a

sense of fullness, an obstruction, as if something foreign were in the mouth—and maybe a dull, nagging pain, which later became sharp, darting, intermittent or continuous. The soft tissues covering the teeth become inflamed and swollen, pain is communicated through the fifth nerve to the seventh and occipital, and so on until every organ about the head is more or less affected either directly or by reflex. At this stage the temperature will rise, pulse become quickened, with fever of course, and a general systemic disorder will result, and if not now relieved the stages of inflammation follow, viz., suppuration and sometimes necrosis, or we may have septicemia with death-dealing poison.

These teeth erupt so late in life, when the bones are so thoroughly ossified and unyielding, and the absorption of the soft tissues covering the tooth so sensitive and slow, that they are unwelcome visitors. Overcrowded arches, small jaws and large teeth, but more often inequality between growth and absorption, is the direct cause for the abnormal development of the third molar.

I have no apology to make in presenting this subject, on account of its having been so frequently discussed, nor because there is nothing new to offer. I will say however, that I was not a little surprised upon searching the standard works on dental surgery for information on this subject to find little or nothing, and I had the following reference books from which to draw: Marshall, M.D., Face, Mouth and Jaw, 1897—nothing; Christopher Heath, F.R.C.S., Injuries and Diseases of the Jaw, 1894—nothing; Kingsley, M.D.S., D.D.S., Oral Deformities, 1860—nothing; American Text Book of Operative Dentistry, Edward C. Kirk, D.D.S.—nothing; American System of Dentistry, 1897—nothing; Quiz Compendium Dental Pathology and Medicine, Warren—nothing.

Therefore it would be natural for the dental student in searching for information on the subject in the above text-books to infer that the operation or treatment for impacted third molars did not come under this head, but under the head of the medical practitioner, or on the other hand do we presume that these several authors never had a case of this kind to treat and nurse along from underneath a covering of highly sensitive tissue, or do they advise the removal of these teeth, because they have so many aliases and condemn them in toto? I will answer that every practicing dentist must have cases of this character, and he cannot and does not

extract these teeth, but has the same unsatisfactory instruments and remedies for relief that you and I have. Some physicians treat impacted third molars by the old heroic method that their forefathers used, viz., surgically "and usually without a local anesthetic," by slitting the highly inflamed gum tissue covering the teeth with a hatchet-shaped lancet. This naturally adds torture to misery, leaving two or more raw overhanging borders to retain fermentative matter which must suppurate and absorb away. Systemically anodynes are often administered; locally the parts are painted with iodin. The operation for relief by the dental surgeon has not been very unlike the physician's, therefore we have nothing to boast of. The method of packing medicated gauze underneath the overlying flap of false gum tissue to force or hasten absorption and exposure is very unsatisfactory practice, as most of us can testify. For want of proper surgical treatment I claim these teeth have often been unnecessarily sacrificed. However, I am not here posing as a critic over what has or has not been done, but the wonder to me is that someone has not devised practical instruments for these cases long ago. The guillotin forcep devised by Claudius Ash & Sons of London has never proved very satisfactory as I have tested it in numerous cases.

In Garretson's System of Oral Surgery he quotes Salter, and on p. 1013 may be found what this author has to say on the subject. He first speaks of necrosis from lack of room for third molars, owing to the close relationship of the second molar to ramus of lower jaw, hence an irritation resulting in inflammation. The trouble, he says, to the bone is always preceded by more or less trismus and difficulty in deglutition.

The advent of the third molars is very often accompanied by painful and distressing symptoms that may be protracted through many months, or it may be even years, unless relieved by surgical interference. These circumstances arise from the position occupied by these organs, so close to the joint of the lower jaw, where the mucous membrane is reflected from the gum to the cheek and fauces, combined with the very common condition that the jaw is not sufficiently elongated backward to allow them to range in the horizontal series with the other teeth. This mechanical difficulty not only prevents the proper evolution of the teeth, holding them back in their bony bed, but it often prevents their direction of growth

and dislocates them; thus *every chance is given for anticipating surgical relief.* This form of necrosis is to be looked for between the seventeenth and twenty-fifth years.

The extraction of the second allows the third molar to fall forward, thus remedying the irritation and effecting a cure. These cases, he goes on to say, if rightly treated, are as simple and harmless as they are found to be *severe* and *prostrating* if left to chance or improperly managed. *Extract the second molar* and do not attempt removal of the offending one, if such extraction threaten difficulty.

Here is what Garretson himself says: "An impaction of third molar is associated as a rule with inflammatory phenomena, and with false anchylosis of severe type. The trouble begins commonly with a sense of stiffness about the articulation, which is quickly accompanied by swelling and pain." "Unrelieved," he says further on, "such a case is almost certain to develop an osteitis of a grade in severity that will quickly advance to the suppurative stage, which result implies both of the parts, small or great in extent." Now, my practice is to relieve cases of imprisoned third molars surgically, whether it be preparatory for removal or retention of the organ.

My method is as follows: First anesthetize, either locally or systemically, if the conditions are favorable, the same as if for ordinary extraction. If the tooth is completely bound down by gum tissue I first use a hoe-shaped lance and make a transverse incision through the gum from the lingual to the buccal surface, two lines longer than the diameter of the second molar, and below the coronal surface of the third molar, cutting as closely as possible to the mesial surface of the second inferior molar. I then work a probe into the cut and loosen the tissue over the crown of the third molar, whereupon I insert the blade of the probe-pointed scissors on the lingual side, forcing it in to a point a line beyond the depth of the crown of the buried teeth, at the same time holding the concave side of the blade closely against the lingual side of the first and second molars, "these teeth serving somewhat as a guide in this application." Now I close the scissors, making a cut parallel with the jaw. Applying the curvature of the scissors to the buccal surface of same molars, insert the blade and make a similar cut, including sufficient tissue so that there will not be any overlapping edge. Now there are three sides of the covering severed. If this

lid of tissue adheres at any point it should be freed, preparatory for the fourth and finishing cut, which is to be made with scissors with rightangle blades. These are a universal instrument and are designed to be inserted from within outward, one of the probe-pointed blades to be carried underneath the posterior border of the flap of tissue to be removed, and with a single clip the piece is detached, thus leaving complete exposure of the crown of imprisoned tooth. Hemorrhage in proportion to the amount of congestion of the parts follows this operation, and should be stimulated by either syringing or allowing the patient to gargle a warm antiseptic solution. It is to be understood that preparatory treatment is imperative in this, like *all* surgical operations, by evacuation of serum, or pus, by the use of bichlorid solution, pyrozone, whisky, etc., making the parts as aseptic as possible. This of course should be done prior to use of hypodermic injections. By the use of the instruments the enamel is not abraded at all, the inflammation is quickly and successfully reduced, and the wound will heal if the conditions are favorable by first intention. Hot applications, a gargle of arnica water, pasturine, listerine, borolyptol, hamamelis, phenol sodique, may be indicated. An important object is to make the patient comfortable as quickly as possible. A mouth-wash of water, 2 ozs.; carbolic acid, 20 drops; cinnamon extract, 10 drops—20 drops in a cup of hot water, is a soothing wash, besides being a good disinfectant and deodorant. The hot mustard foot-bath at night before retiring augments sleep wonderfully in this as well as all surgical operations about the head. A hygienic diet, anodynes, cathartics, are called for more or less in all these cases.

When the blanket of gum tissue covers only a portion of the third molar the operation is much more simple, but in every case its removal should be complete, and wherever there is a loose fold of gum along the lingual surface of the tooth it should be raised sufficiently with a flat probe to admit blade of surgical scissors, down to a line as near parallel with the cervical border of enamel as possible. The buccal border in every instance should be trimmed as deep as the point of the trimmers can be inserted, so that when the operation is finished there will be no overhanging strips nor pocket upon which the opposing teeth will occlude, or underneath which food and secretions can be retained. Any pockets left around the tooth are germ-breeding receptacles, where fermentation is sure to take

place, irritating the soft tissue and often destroying the enamel, and eventually causing irreparable decay.—*Ohio Journal, May, 1899.*

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OPEN MAXILLARY SINUS WITH CONCOMITANT MAXILLARY SINUSITIS. By Faneuil D. Weisse, M.D., New York. Read before First District Dental Society of the State of New York, December 13, 1898. *Anatomy.*—The sinus maxillaris, maxillary sinus, antrum, and antrum of Highmore are the several names given to the cavity in the body of the superior maxillary bone. (Nathaniel Highmore, an English physician, born 1613, died 1684, is usually thought to have been the first who described this cavity. This is an error, as it had been described by earlier anatomists. Galen described it under the name of "sinus maxillare." All English writers since Highmore have designated it as the "antrum of Highmore.") The proper anatomical name for this cavity is *sinus maxillaris* or maxillary sinus, thus associating it, as it should be, with the other diverticula from the nasal cavity. The names "antrum" and "antrum of Highmore" should be discarded. These sinuses, like those in the body of the sphenoid and the frontal bones and the cells of the lateral masses of the ethmoid bone, are cavities hollowed out of the bone structure and lined by periosteum and mucous membrane continued into them from the nasal cavities.

The walls of a maxillary sinus form the body of a superior maxillary bone, which has the shape of a vertical wedge; the apex of the wedge is at the malar articulation of the bone; the base forms the outer wall of the nose cavity; the superior face forms the floor of the orbit; the exterior face forms the internal wall of the zygomatic fossa; the anterior face forms the facial surface; the inferior face—forming the floor of the sinus—has developed upon it the alveolar process of the bone. It is to be noted here that the sinus has its floor structure proper before the development of the scaffolding structure of the alveolar process for the lodgment of the roots of the teeth, and after the absorption of the alveolar process consecutive to the loss of the teeth. In illustration of this I show you these two skulls; one of about the period of birth, and the other at the period of old age, after the teeth have been shed; in both specimens a perfect floor or inferior wall of the maxillary sinus presents.

The roots of the teeth of the upper arch are seemingly projected as if to perforate the floor of the sinus, but in reality the alveolar

process develops so as to socket the entire roots of the teeth exteriorly to the upper osseous floor of the sinus. At times the encroachment of certain teeth, usually the second and first permanent molars, is such as to raise the floor of the sinus into elevations. Always in these cases the alveoli are lined by the tissues at the apical spaces at the roots of the teeth, while the sinus, opposite to the alveolus, is lined by a portion of the periosteum and mucous membrane common to the entire sinus cavity. It is stated by some authorities that the floor of the sinus is at times perforated by the roots of the second or first molar teeth, but these instances are probably from the post-mortem specimens or after pathological conditions had existed in the alveolus of the root involved. In post-mortem specimens presenting perforation, the perforations are due to the handling in the cleaning and the process of maceration of the bone; while in pathological specimens perforations are due to destruction by necrosis of the osseous floor of the sinus. In this skull you will see an illustration of the usual perforation — a round hole found in the inferior wall of the maxillary sinus, caused in all probability by the process of maceration of the skull.

The roots of the teeth — cuspids, bicuspids and molars—as socketed in the alveolar process, the osseous scaffolding developed for their lodgment inferiorly to the special osseous flooring of the sinus, have varying relations to the cavity of the sinus, that is, their roots vary in the nearness of their approach to the cavity of the sinus. In this specimen the upper cuspid, bicuspids and molars of a side have been extracted; the labial walls of the alveoli have been broken away, and the anterior wall of the sinus has been broken away, so as to expose the interior of the floor of the cavity of the sinus. This preparation thus enables us to appreciate the nearness of approach of the roots of these teeth to the cavity of the sinus. The cuspid alveolus runs up into the roof of the nasal process of the superior maxillary bone, entirely internal to the cavity of the sinus and separated by osseous tissue from it. The first and second bicuspid alveoli, less deep and lodged entirely in the alveolar process, are well separated by osseous tissue from the sinus cavity. The first molar alveolus, bedded in alveolar process, approaches closer to the sinus cavity, but it is separated from it by a well-defined thickness of osseous tissue. The second molar alveolus, lodged in alveolar process, approaches much closer than any of

the others to the sinus cavity, being separated from it by only a thin layer of osseous tissue. The third molar alveolus, lodged in alveolar process posteriorly to the sinus cavity, is well separated by osseous tissue from the cavity of the sinus. From the specimen the order of the nearness of approach of the roots of these teeth, as lodged in the alveolar process, to the cavity of the maxillary sinus is as follows: Second molar, first molar, second bicuspid, third molar, first bicuspid, and cuspid.

It is stated by embryologists that the maxillary sinus is present as early as the sixth week of fetal life; thereafter it increases in size with the development of the bone. In adults it is larger in males than in females, but it is subject to many variations in size, even in the same subject on the two sides. The base wall of the body of the bone, which is also the base of the sinus cavity, forming the outer wall of the nose cavity, presents a large deficiency, which is greatly diminished by the application to the internal face of the body of the bone of portions of the palate, ethmoid, and turbinate bones. The comparatively small aperture remaining, located in the middle meatus area of the nose cavity, is the point of communication of the sinus with the nose cavity. The posterior, external, superior, and anterior walls of the sinus are tunneled by canals for the transit of vessels and nerves to and vessels from the teeth, the mucous membrane of the maxillary sinus, and the gums. The exterior of the body of the bone is covered by periosteum and the superimposed parts. The interior of the maxillary sinus is lined by a delicate and peculiarly structured periosteum, which in turn is lined by a closely adherent mucous membrane; the latter is rich in blood-vessels. lymphatic vessels and nerves, and particularly rich in mucous glands of large size and varying shapes. With some modification the periosteum and the mucous membrane of the maxillary sinus are identical with those of the nasal cavity and its other diverticula. The osseous borders of the aperture of communication between the maxillary sinus and the nose cavity are covered by periosteum and mucous membrane in transit from the nose cavity into the sinus, and their presence narrows the opening to the size of admitting a probe, a quill, or even a larger body. The circumferential mucous membrane at this opening is to be remembered, as in some cases of maxillary sinusitis its swelling may obstruct the flow of pus from the sinus into the nasal cavity.

Physiology.—The functions of the maxillary sinus are: 1. Respiratory, in common with the other diverticula of the nose cavity, in that they are chambers for the warming of the air. Air always being present in them is warmed by contact with their interior mucous membrane, which contains capillaries filled with blood at 98½ degrees F., which warmed air is drawn down by inspiration into the larynx, trachea, etc. 2. Vocal, as reverberating cavities for the modulation of the voice sounds.

Pathology.—Diseases of the maxillary sinus may be divided into: 1. Primary or initial (not under consideration in this article), due to pathological changes of the linings or walls of the sinus.—2. Secondary or sequential, due to causes exterior to the sinus. The secondary or sequential diseases of the maxillary are: 1. Empyema. 2. Maxillary sinusitis.

1. *Empyema of the maxillary sinus* is the correct pathological name to apply to the presence of pus in this cavity. (I have always maintained that the term "abscess" as applied to the maxillary sinus is a pathological misnomer. The pus of an abscess, resulting as it does from inflammation of the central tissue of a part, is lodged within tissue, while in the case of pus in the maxillary sinus the pus is in an actual cavity. I was much pleased at reading the following in Mr. Salter's article in Holmes' "System of Surgery": "The term 'abscess of the antrum' conveys a wrong impression of the real nature of this disease; it is not the suppuration of inflamed parenchyma, but the occlusion in a cavity of the purulent secretion from the surface of a mucous membrane which lines that cavity.") This condition may be due to the following causes: *a.* The entrance into the sinus of pus from an abscess of a contiguous alveolus or from a contiguous sinus, or from the nose cavity. *b.* The presence of pus in the sinus from maxillary sinusitis.

2. *Maxillary sinusitis* is a name which I would give to exudative inflammation of the mucous membrane lining the sinus. The causes of maxillary sinusitis are: *a.* Acute and chronic rhinitis. *b.* Foreign bodies in the sinus. *c.* Traumatism. *d.* Inflammation or abscess in contiguous alveolar cavities, with consecutive abnormal opening into the sinus.

a. Acute and chronic rhinitis are, because of the continuity of the mucous membrane from the nose cavity into the sinus, self-evident causes. *b.* Foreign bodies in the sinus are most often the result of

accidents in the course of the at present usual treatment of open maxillary sinus. *c.* Traumatism is a cause at all ages. Cases in infants a week after birth have been reported where maxillary sinusitis had been induced by trauma, due to forceps delivery. *d.* That morbid conditions of the teeth—molars, bicuspids and cuspids—and their alveoli are the most frequent exterior causes of open maxillary sinus with comcomitant maxillary sinusitis is almost the universal opinion of surgical authorities, and such has been my experience for the past twenty-five years. In adults in by far the majority of cases the following is the history of the prodromata of an open maxillary sinus with concomitant maxillary sinusitis: One of the teeth (most often the second permanent molar) becomes diseased by caries of the tooth extending to exposure of the pulp; periodical attacks of pulpitis follow. If the tooth condition is neglected pericementitis and alveolar abscess develop: the abscess may open into the sinus, inducing empyema, or it may open at the labial wall of the alveolus. (The contiguous inflammation of the alveolus causes irritation of the periosteum and mucous membrane of the sinus, and a secondary or sequential maxillary sinusitis is induced, which manifests the following symptoms: Deep-seated discomfort or pain in the cheek area; this, however, is usually referred to the affected tooth, and some pain on pressure over the wall of the sinus. This insidious sinusitis, coincident with the alveolar inflammation, has its focal point at the floor of the sinus, directly opposite the diseased alveolus, and a protective formation of bone occurs at this point, which thickens the osseous floor of the sinus between the alveolus and the sinus cavity. In Dr. Cryer's latest article on the maxillary sinus there is a beautiful illustration of the formation of new osseous tissue at the floor of the sinus in a case of this kind. This thickening of the bone at this point is an attempt to protect the cavity from the intrusion into it of the products of inflammation existing in the alveolus.) If extraction of the tooth is delayed the confined pus, pressing on the walls of the alveolus, interferes with their blood-supply, and its osseous structure undergoes degeneration by which it is rendered friable. The same change also takes place in the osseous septum between the alveolus and the sinus cavity. Finally the tooth is extracted, and although the greatest care may be taken in the operation, more or less of the alveolar wall is comminuted, owing to the degeneration of the osseous structure; and after the

extraction there will be found an opening into the maxillary sinus. As a rule the opening into the sinus is not at first recognized, attention being called to the condition by the patient's complaining of deep-seated pain in the superior maxillary region; that air and sometimes fluids pass from the mouth to the nose, and at times that there is a discharge of pus from the nasal cavity of the side. There may also be a change in the patient's voice. These symptoms will be attended by persistent non-cicatrization of the alveolus, with continued discharge of pus from it. An examination with the probe will in such cases determine an abnormal opening into the sinus and account for the existence of the concomitant maxillary sinusitis. Sometimes an open sinus with concomitant maxillary sinusitis is not preceded by exactly the above prodromata; there may be the following variation: Retained roots of teeth, usually those of the upper second molar, that have been keeping up a chronic pericementitis, with of course free drainage at their distal peripheries, which has induced degenerative changes in the osseous walls of the alveolus and the septum beeween the alveolus and the sinus cavity, with concomitant chronic maxillary sinusitis. These roots being extracted, an open maxillary sinus is present and there will be a continuance of the maxillary sinusitis.

Treatment.—It is not necessary to detail the methods of treatment resorted to—of injections of irritating antiseptics and simulating solutions into the sinus—or to speak of the usual measures resorted to to keep the opening patent by tents and carefully adapted drainage-tubes. With all due respect, I have never resorted to these measures, as I have regarded them as tending to aggravate and to perpetuate the abnormal conditions. Longstanding cases of open maxillary sinus with continuous discharge of pus, after active local treatment, are too often thought to be due to some undiscovered condition of the interior of the sinus—ulceration of its mucous membrane or necrosis of its walls—and heroic measures are resorted to to expose its interior by enlarging the alveolar opening or removing its anterior wall or opening the cavity at the inferior meatus of the nose, for the purpose of freer drainage or of curetting its interior. All such conditions if present I claim will have been due to the treatment, and that they might have been avoided by an early, conservative local treatment, with attention to the systemic condition of the patient.

The local and systemic treatment of a given case of open maxillary sinus with concomitant maxillary sinusitis should be determined upon after having appreciated the following conditions: 1. Determine the exact condition of the sinus by the character and quantity of the discharge from it. 2. Ascertain the existence of any peripheral sources of irritation to the sinus. 3. Determine the existence of any systemic condition likely to impair the recuperative powers of the system. 4. Realize the nature of the changed physiological state of the sinus cavity.

1. The character and quantity of the discharge will indicate the degree of inflammation of the mucous membrane of the sinus. Almost invariably it will be found to be in a septic condition, evidenced by more or less pus flowing from the abnormal opening, and at times from the nose cavity of the side; and hence the perpetuation of the sinusitis. To meet this condition the patient should be given a suitable syringe and instructed how to inject the sinus by the abnormal opening. This he should do at least five times a day with a solution of sodii hyposulfitis, one dram to one ounce of water. As this treatment is carried out the character of the discharge should be noted, as to whether it loses its purulent character and becomes mucus. When the discharge has become mucus, and has continued so for some time, there will be noticed a gradual closure of the opening, with a change from redness and swelling of the edges of the opening, while the discharge was purulent, to a normal tint of the edges of the orifice. Under the latter conditions the syringe nozzle will not enter the opening so easily and attempted injection is attended by a certain amount of backflow. Under these circumstances no force should be used to effect injection of the cavity, and as the closure of the opening proceeds the injection should be diminished in frequency and finally suspended.

2. All existing peripheral sources of irritation should be treated. Remove any roots of teeth present in any of the aveoli of the upper jaw of that side, and keep their alveoli thoroughly aseptic until they are cicatrized. Any teeth in the upper jaw that are dead should be thoroughly treated by removing pulps, cleaning out root-canals, etc. Any rhinitis of the nose cavity of the side should be treated.

3. If any deviation from the normal of any important function

exists, the patient should be placed under a regimen of life and remedies calculated to correct the same, so as to bring about a systemic condition of good health. I have improved many cases and put them on the road to a cure by careful attention to the general health. This latter indication is almost invariably neglected.

4. To realize the nature of the changed physiological state of the sinus cavity we should appreciate that it is a secluded cavity, extremely susceptible to irritation, even by slight modifications of its normal condition; that the only access of air to and from it is at the opening by which it communicates with the nose cavity; that normally air entering and leaving it never passes through it by currents; that its mucous surface is continually bathed by a secretion from the large mucous glands of its mucous membrane, which protects it from irritation from the air entering it. With an abnormal opening into it an abnormal amount of air reaches it, and with the opening at an alveolus each inspiration and expiration is attended by a current of air passing through it from nose to mouth, and the reverse with the mouth open. This abnormal access of air in currents dries the surface of the mucous membrane. This in itself is an irritation to the membrane which tends to perpetuate the maxillary sinusitis. A parallel condition is seen, but to a greater degree, where the mucous membrane of the nose cavity is subjected to abnormal access of air, in cases of fissure of the soft and hard palate. In this latter case a chronic rhinitis developes, which induces a permanent induration of the abnormally exposed and dry mucous membrane; thus adapting it to the existing abnormal conditions. Furthermore, with the maxillary sinus open to the buccal cavity, eating and drinking is attended by the ingress of food and drink into the sinus and through it to the nose. These abnormal conditions realized, a most important indication of treatment presents; that of restoring the open maxillary sinus as nearly as possible to its normal physiological state of a secluded cavity. To effect this the following measure has been resorted to with success: Close the face of the abnormal aperture by a closely-fitting hard-rubber cap, which should overlap upon the labial and palatal surfaces of the gum and be held in place by suitable fixation to the adjacent teeth. This is to be worn during the day, especially when eating and drinking. After each meal it is to be taken out and carefully

washed in the hyposulfite solution used for the injections. At night it is to be removed. In the morning before introducing the cap, after meals before replacing the cap and at bed-time after taking out the cap, are the times when the injections should be made into the sinus.

This cap over the abnormal opening restores the sinus as nearly as possible to its physiological state of a secluded cavity; it prevents undue access of air and currents of air, which causes the mucous membrane lining the cavity to resume its normal moist condition. Irritation removed, the mucous glands resume their secretion. As worn at meals it effectually prevents the entrance of fluids or particles of food; and it does not interfere with the discharge of pus or mucus, as they readily overflow the cap.

During the past twenty years or more I have treated not a small number of open maxillary sinuses with concomitant maxillary sinusitis of varying periods of duration, and after they had undergone manifold methods of treatment and operative procedures. I never have had a case that came to me soon after the abnormal opening was developed, before having undergone any treatment, that I have failed to arrest the existing maxillary sinusitis and to induce a prompt closure of the abnormal opening. In those that I have not seen early enough, where the opening had been enlarged by operation and the mucous membrane had been subjected to irritation by remedies and the wearing of tents and drainage-tubes, I have succeeded only after prolonged treatment in bringing about a favorable result; and in the cases that had undergone heroic operative treatment I have been able only to render them more comfortable. The experience that I have had warrants me in making a crusade on all irritating local treatment and on all operative measures in cases of open maxillary sinus and concomitant maxillary sinusitis, and in believing that the immediate carrying out of the treatment outlined above will be attended by good results.

The following is an epitome of the treatment to be carried out: 1. Render the sinus aseptic by the mildest possible injections (sodii hyposulfitis one dram, water one ounce), watching their effect on the discharge (changing from purulent to mucous), and be governed accordingly as to their continuance. 2. Remove all peripheral sources of irritation to the sinus. 3. Place the patient, according to conditions, on a proper regimen of life and course of medication to

induce a healthy systemic condition. 4. Restore sinus as nearly as possible to its physiological condition as a secluded cavity, by a hard rubber cap worn over abnormal opening.—*Cosmos, June, 1899.*

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CASE OF ORTHODONTIA COMBINED WITH BRIDGE-WORK. By Geo. W. Haskins, M.D., D.D.S., Chicago. In May, 1897, Miss X. called upon me. Upon examination I found, in addition to the usual caries one would expect under the circumstances, on the lower jaw a porcelain central attached to the left lateral by a gold band; the lateral was apparently in good condition; the other central was absent and the space where it had been was closed, the right cuspid and first bicuspid closed outside of the arch of the upper teeth; on the upper jaw the centrals had each been crowned with a Richmond crown, the gum surrounding them was inflamed, and pus was flowing from around the neck of the left central; there was nothing to indicate faulty root filling, though the coloring of the porcelain teeth was at fault and their size disproportionately large that they might more nearly fill the space between the cuspids, for there were no laterals present, one never having erupted, and the other—a small, round, pointed tooth—had been extracted by the advice of the dentist.

The previous history of the mouth as gathered from Miss X. was that the centrals had been filled six times, and the last filling had caused the death of the pulp in the right central, and subsequently it became very much discolored; this, coupled with the fact that they were both abnormally large and unsightly, caused her to accept the advice of her dentist, and they were cut off and crowned. And then to quote from a letter, "From time to time both teeth ulcerated; about a year later while I was in another city they ulcerated again and I consulted Dr. ——; he drew off the pus, treated the teeth for about a month and recrowned them, after which they gave me no further trouble."

The previous history of the upper lateral I have spoken of and of the absent lower lateral I got no history. The filling of the carious cavities presented no unusual features, and I will pass to the work on the lower jaw. It was decided at once to remove the band and artificial tooth from the lower left lateral and to draw the right cuspid and lateral mesially to fill the space left by the absent central, and so the cuspid would close within the arch of the upper teeth.

Upon removing the lateral band I found upon the lingual side of the tooth beneath the band a cavity of decay which had the appearance of having been made originally with a bur. It extended through the enamel and gave unmistakable evidence of decay, induced, I think, by the presence of the band.

The conduct of the case was as follows: The left cuspid and both bicuspids were banded with wide bands and united where they joined each other; narrow strips of German silver, gauge twenty, were then soldered upon the labial and lingual sides of the bands, using considerable solder, aiming to make the attachment so solid that power applied to it at any point would move it as a whole. The labial portion of the strip was extended to the molar. It did not seem advisable to include it in the anchorage more than this, as it was not in a very stable condition; as I had been compelled to remove a crown from it, treat an incipient abscess and fill the roots, it had been left rather irritable.

The right cuspid was banded, but it was not necessary to band the lateral, as it could not well escape moving in the right direction, since it was forced forward by the cuspid; the usual traction screw was then used and the movement was continuous from the start until the gap was closed and the cuspid closed within the upper arch. To retain them in this position I now made a gold crown for the left first molar, from which it will be remembered one had been removed. The right first molar and lateral were banded and upon the buccal surface of both molar band and crown a tube was soldered (with its long axis extending in an antero-posterior position), which would provide support for a wire which was fitted to the labial surfaces of the teeth and extended from molar to molar; this was threaded on the ends for a distance greater than the length of the tubes; two nuts were then made for each end; upon the labial surface of the lateral band was soldered a short section of tubing in such a manner that it could be opened at the joint and then closed again after the retaining wire has been placed in it. With the crown and band cemented in place, one nut was screwed on each end of the retaining wire as far as it would go, the ends were then slipped through the tubings on the molars, the distal nuts turned on and tightened until the teeth were all held tightly in place; the mesial nuts were then turned back as far as they would go, thus locking all tight together, after which the open tubing on the lateral

was closed, providing support for the middle of the wire. As a retaining appliance this did not prove an entire success, as in time I found the nuts would loosen. To prevent this I made for each side an attachment of wire made from eighteen k. gold and which had been drawn to gauge twenty-three, the last six holes without annealing. A ring was bent in the end of this wire just large enough to permit the passage of the retaining wire; the ring was then grasped in the flat pliers and the balance of the wire bent at right angles to it and at such a distance that when the ring was passed over the retaining wire the portion bent at right angles rested upon or engaged the flat side of the nut, so that the nut could not move without carrying the wire with it. The other end of the wire was then shaped like the first, the two rings at such a distance apart that they fitted snugly against the mesial and distal surfaces of the first and second nuts when all were in position. To apply it one ring was opened enough to permit the retaining wire to slip through, the other was passed over the distal end of the retaining wire, the opened ring slipped over the retaining wire in front of the mesial nut; the ring was then closed with the pliers, which drew the wire flat against the nut and effectually prevented any further movement.

On account of the pathological conditions which had existed previous to my seeing the patient, and from those which prevailed when I first saw the case, I questioned the wisdom of attempting what I very much wanted to do, namely, to make sufficient space between the upper cuspids to insert a bridge, consisting of the two centrals and the missing laterals, and finally decided only to replace the central crowns with two which would be more sightly, and at the same time to discover the cause of the pus formation around the left central and remedy it if possible. Upon removing the crowns I found the roots filled with oxyphosphate of zinc cement, the right well and the left imperfectly. They appeared to me to have been filled when the crowns were placed, depending upon the pin of the crown forcing the cement up into the root-canal. No shaping of the roots had been attempted other than to grind them level with the gum. A rim of enamel still showed on the end of the truncated teeth, and the bands which had been fitted to them necessarily irritated the gums and caused the pus which I have mentioned. After treatment I filled roots with gutta-percha points, reshaped them, and made two Richmond crowns and set with gutta-percha.

From the better knowledge of the condition of the roots gained by seeing them with the crowns off it seemed advisable to proceed with the plan of placing a bridge of four teeth on the central roots. The first step in the operation was the drawing back of the cuspids until the space between them and the bicuspids should be closed.

A description of the appliance used for one side will answer for both. On the right a first bicuspid and a first molar were banded; these were then united by German silver strips, gauge twenty; on the lingual side the strip was allowed to extend well forward; on the buccal side of the molar was soldered a short section of tubing, which was threaded; for this was made a long headed bolt; a strip of German silver was then rolled hard to gauge thirty-five, and from this was cut a long strip, one-eighth wide throughout most of its length, but on one end it was left one-fourth inch wide; this greater width was to enable me to attach it to a short section of tubing in which the bolt would turn freely, yet small enough to prevent the head of the bolt slipping through; the wider portion of the strip was wrapped around the tubing and soldered with soft solder. Soft solder was used because I did not want to soften the metal by a greater heat; the bolt was passed through the tubing and turned into the nut on the molar band; the flexible strip was then carried around the cuspid and united with the lingual portion of the attachment with soft solder; this supported the flexible band and prevented its slipping up on the neck of the tooth. The head of the screw was slotted and was turned with a screwdriver which drew on the flexible band and soon drew the cuspids back to the desired position.

In order to retain them there I left the appliance in place, but as I wanted still more space between the cuspids, an expansion screw was made and attached to the lingual strips of the appliance by means of clips, which were bent around the strips without removing the bands from the mouth; so little expansion was needed that no precaution was necessary to prevent any undue tipping out of the cuspids.

There remained now but to bring the centrals together, and when together to have them divide the space between the cuspids equally; this gave more difficulty than any other step in the operation.

While using the expansion screw to increase the distance between

the cuspids, I thought to accomplish two steps at once by wedging between the right cuspid and central with pine wedges, not expecting to accomplish all the movements of the central but merely to help. I soon abandoned the plan, as I found that the apex of the tooth was tipping badly to the middle line of the mouth and although they were but roots to be crowned, I wanted them to be parallel, to facilitate the making and placing of the bridge.

After the cuspids were sufficiently spread and they had recovered somewhat from the soreness incidental to their movement, the first appliances made were removed, and the cuspids and the right central were banded. The band for the central was very wide, covering almost the entire exposed portion of the tooth; with round German silver wire, gauge eighteen, I now made an arc to connect the two cuspids and made to slide upon this a piece of tubing one-fourth inch long, made from German silver plate, gauge twenty-six. The joint was soldered and it was just large enough to slide freely on the wire. Some precautions are to be observed in making and bending this tubing in order to make it successful. The soldering of the joint should be done with the smallest possible amount of solder, with no surplus solder within the tube, and any surplus upon the outer surface removed, otherwise when the tube is drawn through the draw plate the outside becomes uniform and the irregularities are transferred to the inside of the tube. After soldering the tube should be drawn to the requisite size, annealed and slipped upon a German silver wire that fits it snugly. This wire should be well coated with beeswax and inserted when hot and the wax fluid, then wire and tube are bent together to the shape wanted, saw through both tube and wire for one end of the tube and only through the tube for the other end. This will leave the wire uncut, and it can be grasped by the pliers while wire and tube are heated and the tube pushed from the wire.

That portion of the wire arc which was opposite the right central I cut a thread upon and made a nut to fit; then slipping the tube on the wire and turning on the nut, I coated all with rouge and soldered the ends of the wire to the cuspid bands and the tube to the central band, this latter quite solidly, so the band could not twist on the tube but must necessarily follow the movement of the tube as it slid along the bent wire when the nut was turned; the movement of the central was continuous and it never lost its upright position; it

soon met the left central, and after moving it slightly they were left in the center of the space between the cuspids ready to complete the bridge.

From the movement of the central from the cuspid and to the other central the gum receded from its distal border and piled up upon the mesial, exposing the gold band on the distal side of the crown. This made it necessary to cut down the root and make a new crown, and that they might be alike I made one for each root and attached the laterals; the bridge was finally set with gutta-percha and furnished all the retention needed to prevent the teeth returning to their former position.

The work was completed in about twelve months from the time it was commenced. Several times during work time was lost on account of the illness of Miss X., and through waiting for the teeth to recover from the soreness resulting from their movement. It also seemed best to move the centrals slowly and cautiously, considering their previous history. At no time did they give evidence of any unfavorable conditions.—*Review, May, 1899.*

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FALSE TONSILS. By Robert H. M. Dawbarn, M.D., New York. Read before the N. Y. Institute of Stomatology, March 7, 1899. This subject is in one respect unique. Nowhere else than within the magic circle of "Waldeyer's tonsillar ring" can be found a common meeting-ground for seven distinct classes of practitioners, all really interested in the subject. The otologist, because here lies the commonest cause of deafness. The rhinologist, because here is found one of the most frequent sources of nasal catarrh. The laryngologist, for the reason among others, that obstruction of the vault interferes wofully with tone-production, as also do the high narrow arch of the palate and abnormally small antra. The stomatologist, because the disease in question leads to peculiar malformations of the upper jaw and to defective dentition, with consequent necessity for regulating-work. The neurologist, because a half-dozen psychoses and neuroses have an occasional starting-point here, from reflex irritation, as well as from a poisoned and ill-aërated blood which cannot properly nourish the nervous centers. The general practitioner, because of effects upon all organs and bodily functions from the cause just hinted at; and finally the general surgeon diffidently expresses his interest in the subject—just because.

I have spoken of pharyngeal false tonsils. The correct term is pharyngeal lymphoids or lymphoid growths. Adenoids is the more usual designation, but there is no pathological justification for it, and writers careful in nomenclature are already dropping this unfortunate term.

These vegetations are practically identical in structure with the faucial tonsils. That is the same as saying that they are open-meshed lymph-nodes, very vascular, having however, no deep crypts or pockets, but abundance of irregular spaces between them wherein dirt and discharges are held, and being in a measure without the dense capsular investment of lymph-nodes elsewhere.

At what age do they appear, and with what frequency? There seems to be no period even of early infancy exempt. One of the worst cases I have cured was in a baby not nine months old. A surprisingly large amount of lymphoid material was removed.

Regarding the frequency, doubtless climate is a prominent factor therein. When, less than a generation ago, the disease began to be generally recognized, it was at first claimed that five per cent of all children suffer therefrom, to some degree, in our very severe climate. But of late I am sure that this estimate is by those competent to judge regarded as much too low. Some specialists double it; and yet I can well believe that in the tropical and sub-tropical zones, and especially where the air is comparatively dust-free and the variations in temperature and humidity are less startling than with us, there may be much lower percentages than I have named.

The ill effects of large pharyngeal and faucial tonsils are numerous. With an audience of stomatologists I will however, discuss and dwell only upon those having a direct bearing upon that specialty of medicine. Perhaps the most prominent of these bad results are four: 1. The high narrow arch of the palate. 2. The insufficient development of the upper jaw. 3. The dentition, irregular in order and imperfect in quality. 4. The tendency to decay, especially of the teeth nearest these growths, and to various types of stomatitis and gingivitis, mainly induced by the myriad microbes which the interspaces of these vegetations harbor and encourage.

1 and 2. To study these in order: How shall we explain the high, narrow hard palate which is so frequently found in children subject to the troubles in question? After considerable thought I would reply, that there seem to be at least six factors in its causa-

tion. (*a*) The first and most important of these I believe to be a purely mechanical one. To explain: I am surely not overstating the fact if I say that nine out of every ten cases of pharyngeal tonsils are also cases of diseased and abnormally large true or faucial tonsils. It is certainly the rule with me rather than the exception to have to remove these at the same operation with the emptying of the obstructed pharynx. Now I am certain that any other surgeon will agree in telling you that a fact too frequently overlooked is the firm adhesion so often found, when sought for, between the diseased tonsil and the pillars of the fauces, and especially the anterior pillar. An operator neglects his duty who does not look for and carefully separate such adhesions; and sometimes this is not easily done, for they twain have become one flesh, so to speak. This being true, it seems plain that in the act of swallowing, the large tonsils, being dragged down mechanically with the bolus of solid food, in turn exert a distinct downward pull or tug upon their adherent pillars; and these in turn must pull down upon the sides of the bony palate, to which they are attached. Inevitably when many thousands of times this tug is repeated in the course of months and of years a lateral narrowing of the arch has to result. (The writer has recently learned that Dr. Dwight L. Hubbard also holds the opinion as to causation just expressed herein, but does not know who originated it.) If this explanation be the true one, it follows that we should see the high, narrow arch in its extreme development mainly in the cases where tonsillar hypertrophy with adhesions to the pillars of the fauces is particularly well marked, and beginning while the bones are still young and soft enough to yield readily to such force; and this I believe to be true.

(*b*) The second factor in causing the narrow arch is so obviously important that no one can gainsay it. Once let this condition be begun by the cause just studied, and presently we shall find that the narrow superior dental arcade will begin to articulate towards the inner or lingual side of the inferior dental arcade; for the lower jaw is not especially involved and develops naturally, therefore becoming wider in the transverse measurement between its alveolar process than the upper jaw. As soon as such abnormal articulation has well begun, every time the teeth are firmly opposed they will tend to maintain the narrowness of the upper arch, and even to exaggerate it.

(*c*) The third factor in causation of this malformation of the upper jaw has to do directly with the pharyngeal obstruction and not now with the faucial. It seems an axiom in nature that any organ, any function, not put into use becomes atrophied and shrunken. Of this numerous instances will occur to you all. With the pharynx so filled up that the child has become a mouth-breather, the nasal air-passages have no longer the same *raison d'être*. They become comparatively useless in the economy, and from all sides nature begins to close in upon this waste space, largely perhaps from atmospheric pressure. The rising of the arch of the palate, which is also the floor of the nose, is a step in that process.

(*d*) In the case of young mouth-breathers the still soft bones of the upper jaw may well be expected to yield in some degree to the downward and continual traction of the soft parts of the sides of the face, pulled upon by the weight of the fallen lower jaw. The effect of this must be to bring the sides of the arch nearer together.

(*e*) In a recent most interesting study of the stigmata of degeneration, Dr. Frederic Peterson, one of our highest authorities, has discussed many of these, and among others he includes abnormally shaped palates, specifying the high, narrow, or Gothic roof of the mouth, the hip-roofed shape, the abnormally flattened, and a few others. I do not mean to have you infer that either he or I believe that more than a small minority of such palates represent such stigmata; but a few do, and hence we must include this factor among our causes. In some instances, though not indicative of degeneration, the narrow arch or other unusual shape is unquestionably a matter of family inheritance, just as the shape of the nose is for example.

(*f*) Dr. J. B. Littig has pointed out that normally the tongue against the roof of the mouth supports the latter and maintains its normal shape, while the bones are soft in nose-breathers. But in mouth-breathers the tongue no longer can serve this useful function.

3. The third of the bad results of the stomatological nature was dentition irregular in order and imperfect in quality. This it would seem can readily be explained since it is in the same category with the numerous other physiological activities adversely affected by insufficient oxidation, and by continually poisoned salivary and mucous secretions, with consequent anemia and malnutrition.

4. Regarding a fourth group of symptoms caused by the disease we are studying, I would allude to the readiness wherewith the teeth of these children decay, and especially those teeth which are hindmost, thus lying nearest to the poison-filled tonsils or pharyngeal vegetations. Quite recently, in talking informally of tonsillar troubles, a member here present volunteered the remark that he was sure he had observed this, and two other members confirmed the statement from their own experience.

The diagnosis: How shall this be made? Of the six way-stations upon the ellipse of Waldeyer's lymphoid ring, the lowermost three are open to ocular inspection with some degree of ease, i. e., the tonsil of the tongue on its upper surface and quite close to the epiglottis, and the two true or faucial tonsils. The symptoms produced by hypertrophy of the glossic tonsil need not concern us in this paper. The other three way-stations are all pharyngeal ones, namely, the uppermost or Luschka's tonsil, and the two tubal ones or cushions of the Eustachian tubes.

Of course the scientific and exact way of diagnosis is to examine the pharynx by aid of the forehead mirror, and the laryngoscopic or the post-nasal, which is a little mirror just such as you employ for help in your own work. But the educated finger-tip is quite sufficient though a more unpleasant way to determine absolutely the need for operation. One can recognize with ease in an instant, after a little practice, the absence of the smooth, slippery, healthy mucous membrane, resembling closely in feel the inside of the cheek—the buccal mucous membrane—and instead, the presence of the mushroom or cauliflower growth, varying greatly in consistency according to age, duration, and rapidity of development. Also the doctor can determine at the same moment whether one or both of the passages of the posterior nares be obstructed.

A very simple means of diagnosis, requiring but a second or two of time and no experience, is that if the examiner's soft finger-tip, with nail trimmed close to the quick, produces a naso-pharyngeal hemorrhage, there is surely an abnormal and excessive degree of vascularity there, calling at least for a surgical opinion. There should no more be bleeding from the pharyngeal vault swept lightly by the finger-tip than from the tongue or the buccal mucous surfaces under like circumstances. To be sure malignant growths and certain other diseases may bleed thus upon touch, but these

are very rare by comparison, and also need a consultant's opinion. But aside from any direct examination of the space behind the curtain of the soft palate, if you find a child who is a mouth-breather at most times, who snores when asleep, whose utterance tends to be thick and resembling in its faulty consonants the pronunciation caused by severe cold in the head, whose expressionless face and open mouth give him a stupid look, with even less than all these together, you can be practically sure of your diagnosis. (Of course, I assume that there is no obstruction of the nasal passages to be observed from the front.) With such a picture we commonly expect to find also enlarged faucial tonsils; and their presence accordingly adds to your certainty. It is worth noting *en passant* that a baby who is very subject to coryza and "snuffles" most of the time, is probably either syphilitic by inheritance or already afflicted with pharyngeal lymphoids.

In children old enough to understand and follow directions we are able to try the Valsalvian test, of closing the nostrils and trying to have them blow air through their Eustachian tubes, which any normal person can learn to do, feeling the air distend the ear-drums. Not to be able is often indicative of obstruction at the mouths of these tubes, and explains why growths here are known to be the most frequent cause of deafness, for the air pressure should in the healthy tympanum be equal upon both sides of the ear-drum. Of course this is a test as to the Eustachian tubes, and not merely as to the presence of vegetations in the pharynx, which may be present and growing in such a way as not to press on the tubes. Clifford Allbutt states that the very worst degrees of depressed ear-drums are found in bad cases of pharyngeal lymphoid growths, and that these children are the ones who when stricken with diphtheria or scarlet fever quite regularly develop suppurative otitis media and perforations.

Prevention—I know of no means whereby in a catarrhal climate, such as that of the northeast American seaboard, one can be assured of success in preventing lymphoid developments. Of course, local cleanliness is of the utmost importance. The hygiene of the nose should be taught as carefully as that of the mouth, and how the nose may with safety be cleansed; for if done improperly, as we all know, syringing is capable of causing damage to the ears, by forcing infected mucous discharges up the tubes.

One point in prevention may seem to you somewhat heterodox, and yet upon afterthought I believe will commend itself to you—namely, that so far from endeavoring to break a baby of the habit of thumb-sucking, in our climate at least, it is rather to be encouraged; for it is obviously true that a thumb-sucking child cannot be mouth-breathing at the same time, and that consequently the habit promotes the natural function of the nose and nasopharynx in respiration, tending to keep these passages free. Also so far as a slight vacuum is produced in the mouth during the sucking, between the tongue and hard palate, this should tend to bring down the arch of the hard palate through atmospheric pressure from above, that is, air within the nose. Of course, it is plain that there are certain disadvantages too; possible protrusion of the upper front teeth, for example; but I am alluding just now to nasopharyngeal affairs, and upon the score of these am gallantly defending the little ones' chief comfort in life when aggrieved and unhappy.

Treatment—This is solely operative. I will waste no time over discussing palliative measures. The operation of tonsillotomy is performed in a few seconds with the guillotin of various modifications. We also need to separate by another instrument the frequently adherent pillars. In very rare cases the shape of the tonsil is flat and diffuse, rendering amputation impossible and demanding the electric or actual cautery point again and again for its diminution and absorption.

As to anesthesia, I prefer the local application of a solution of eucain B rather than cocain, for the reason that eucain B does not shrink the growth, for it does not contract arterioles. Cocain *does* very distinctly, so that one cannot remove after use of cocain so much as is desired, because of this retraction due to sudden anemia. Of course the latter—the anemia—is a good point as to checking bleeding. However, hemorrhage is rarely excessive, and gargling with very hot water usually suffices. Not to carry this paper to greater lengths, I do not discuss the treatment of such occasional instances of further bleeding. It is enough to say that the operation is entirely safe.

Regarding the ablation of pharyngeal lymphoids, simple as all agree that this is in skilled hands, opinions differ widely as to the best technique. I will quote Seifert: "There is hardly another

form of disease in which individual views regarding the method of operation, as well as anesthetic to be employed, are so diverse as in adenoid vegetations." This prominent specialist prefers chloroform, only a very light seminarcosis being allowed, and the child held sitting upright and leaning forward, the blood running thus out of the mouth and nose. Certain others are cruel enough to use no anesthesia at all. Cocain or eucain are nearly useless because of the flow of blood which promptly washes them out of the tissues. Indeed I know no small operation in which there is, just for an instant, such a gush or hemorrhage as that at the moment of detaching these very vascular growths; but it ceases as promptly as it comes and is not to be feared.

Personally I do not consider it safe to give chloroform in the upright position. My own choice is for chloroform in this operation, as in most, provided the anesthetist be skilled; otherwise ether. It is generally admitted that in childhood chloroform is safer than otherwise; and with care it may even be given during sleep, thus preventing all excitement, the child sliding from natural into anesthetic sleep. The child is gagged and then put in Rose's position, in which the head is allowed to drop down and backward beyond the end of the table; thus the blood cannot run towards the larynx, being directed by gravity out of the nose and mouth.

As Dr. Delavan among others has pointed out, there is more than a theoretical danger of inhaling a blood-clot and thus choking, if the position of the child renders this possible. It is very likely that the gentlemen here present to discuss this paper may each have his own choice herein; as also regarding the preferable instrument. Gottstein's curet, a kind of ring-knife, is very safe and is popular for this purpose; though post-nasal forceps of various curves and shapes, and a few other tools, are occasionally employed.

In little babies the vegetations may sometimes be found so soft that even a strong and long finger-nail will suffice for their removal. With the flowing blood and necessity for speedy work, for bleeding ends only with detachment of the growths, it is hardly necessary to say that the operation is not done with mirrors and reflected light, but entirely by sense of touch; the left fore-finger guiding the action of the curet or of the forceps.

The aftertreatment is very simple. There is but slight discomfort, for the operated surfaces are above and behind the hanging

palate, and deglutition does not bring the food in contact with any raw part. Any ordinary sore throat often causes much more annoyance than these little people feel the next day. They usually are kept recumbent only twenty-four hours, assuming that the circulation is normal. If any unpleasant odor whatever be noted after a day or two I gently syringe the nose with warm normal salt solution, otherwise I do not disturb the healing surfaces which nature is at work upon.

The child must be encouraged to use the natural breathing passages now. Quite as a habit mouth-breathing may otherwise continue to his detriment. But *before* this operation it is simple cruelty to demand that a mouth-breathing child shall keep his lips closed. It would mean a partial suffocation.

Does the disease recur? Very rarely when the operation is well performed; and the same is true of a rehypertrophy of the amputated tonsil. The cases of recurrence are so excessively rare as to be a negligible quantity, not over one per cent at most.

In conclusion—If we admit that the points I have made are well and truly taken, that in sundry ways tonsillar growths, both oral and pharyngeal, are bad for the stomatological welfare of the dentists' little patients, then it surely follows that dentists have a duty to perform in urging upon the parents of such patients the need of surgical intervention for both prevention and cure—the removal of faucial tonsils and careful separation of all adhesions here, to avoid the narrowing of the palatine arch; the ablation of pharyngeal tonsils to prevent such an arch, and also ill-development of the whole upper jaw and faulty dentition; the removal of such growths because they prevent sufficient oxidation of the blood, also because they are culture-cabinets for microbes innumerable, continually supplying in their deep crypts or irregular interspaces poisonous ptomains and toxins from life and death processes of these little enemies which shoot with poisoned arrows, thus vitiating the victim's blood. In both these last ways are induced anemia and vital weakness, whereby dentition, in common with other important physiological processes, suffers and is performed but indifferently well at best, and at worst very badly.

These things being by you made clear to the parents, and that the necessary operation is in no sense a dangerous one, I feel sure that few, indeed, among the more intelligent of these will fail to

accept the means thus advised, and in later years to acknowledge in consequence a fresh debt of gratitude to that excellent friend, the conscientious and cultured family dentist.—*International, June, 1899.*

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MERITS OF ROOT-FILLING MATERIALS. By Dr. Ludwig Hattyasy, Budapest. Filling of root-canals of the various teeth which present themselves to the practitioner is one of the most trying and complicated operations to which we as dentists are heirs. It will certainly be of interest to you to learn of the innumerable methods and materials which enter into the closing of the root-canals. I have labored in gathering the methods as advocated by the leading dentists of the continents, and I can assure you the deductions will be of benefit to those who are giving this important branch of operative dentistry their consideration. Many dentists do not give any attention to the new methods which from time to time present themselves in the society meetings, but much must yet be ascertained if we hope to successfully fill and save roots containing the favorite filling. If any are dissatisfied with the results of their work it will be to their interest to glance over the various materials used by others, as it may suggest some material or method which may become universal. Whatever be your success in this direction, you owe it to your profession to make known the true results in order that some material may be recommended as giving perfect satisfaction.

The following are the points which the material and method should possess: 1, it must perfectly seal the apex of the root; 2, it must be readily inserted; 3, completely fill the entire canal; 4, it must possess attraction and adhere to the walls of canal; 5, must possess molecular attraction; 6, have antiseptic properties; 7, must be durable; 8, pliable and moldable; 9, should be easily eliminated from the canal; 10, neither expand nor contract; 11, must not be escharotic; 12, neither unpleasant in taste nor odor; 13, must not discolor the tooth; 14, must be compact, not porous. If these requisites are attained we will have a material which will be universally employed. [Dr. Hattyasy then minutely described these requisites.]

The following table will illustrate the materials employed and their advocates: Advocates of Cotton—Coleman, arsenic acid; Woodhouse, carbol-zinc-phosphate; Jenkins, clean cotton; Detzner, carbolic acid; Nessel, carbol-glycerin; Cunningham, zinc-chlorid;

Betts, cotton impregnated with iodoform; Foucon, thymol; Patton, zinc-chlorid and iodoform; Root, cotton and liquid gutta-percha; Tomes, cotton with celluloid; Allen, cotton (guncotton); Sewell, cotton and sublimate; Firthe, cotton and salol. Advocates of Antiseptic Pastes—Witzel, sublimate paste; Chruschtschow, iodoform paste; Pedley, iodoform paste; Muszler, iodoform paste; Karolyi, carbol-eucalypto zinc; Wallcock, iodoform-lanolin; Wessler, eugenol-zinc; Keyes, aristol paste; Koch, thioform-glycerin; Arkovy, eucatyptol-phenol-camphor; Crawford, liquid sandarac and gutta-percha; Henrich, iodoform-glycerin; Young, aristol-creasote. Advocates of Kohle—Forberg, bor-kohlenwatte; Wellin, formalin-kohlenwatte. Advocates of Cement—Crouse, leaf gold and cement; Kuehns, pheno-iodoform cement; Blakwell, liquid cement; Schroeder, gypsum-formalin; Forssman, formalin cement; Torger, liquid cement with iodoform. Advocates of Crystal Medication—Schriffman, camphor-betel; Rollins, betanaphthol; Weld, metallo-chemical. Advocates of Wax—Hutchinson, paraffin; Hern, iodoform and wax; Muszler, lanolin, iodoform and wax. Advocates of various other methods and materials—Buchet, wooden point and creasot; White, hickory point; Eclimney, silver point; George, gold point with gutta-percha; Farrer, gold screw; Taylor, copper point and gutta-percha; Perreidt, carbol-catgut and cement. Advocates of Metal—Webb, pure gold; Moser, tin; Hattyasy, copper amalgam.

The power of disinfection, tabulated by Dr. Martens regarding staphylococcus pyogenes, is as follows: Iodin, 1 : 10,000; thymol, 1 : 5,000; argent. nit., 1 : 1,000; acid hydrochl., 1 : 1,000; acid sulph., 1 : 1,000; sublimate, 1 : 1,000; acid benzoicum, 1 : 500; acid salyc., 1 : 300; acid carbol.; 1 : 25; turpentin, 1 : 25; zinc chlorid, 1 : 25; antipyrin, 1 : 10; alcohol, 1 : 1.

By comparing the various methods and the several medicaments which we apply to the canal before filling, and also such as remain in the canal permanently, we can arrive at some definite conclusions which will assist in establishing a universal method for the conditions met with in pulps.—*Translated for* DENTAL DIGEST *by Dr. B. J. Cigrand from April, 1899, Vierteljahrsschrift.*

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IDEAL METHOD IN CROWN AND BRIDGE WORK. By George E. Stallman, D.D.S., San Francisco. My method consists in making metal posts for the bands of the abutments to be imbed-

ded in the cast or model made from the impression. Take for instance a case from the first bicuspid to the second molar. The teeth or roots for the abutments are ground as usual and the measurement taken. The bands are now adjusted, making no attempt at contouring; merely see that they fit the roots snugly. An impression is taken with the bands in place; also an impression of the antagonizing teeth or a wax bite; the rest of the work is done in the laboratory, as follows: Remove the bands from the impression and fill the same with moldin, pressing it in close contact between the thumb and forefinger. Now remove the moldin say to the depth of one-sixteenth of an inch from the gingival portion of the band, cut a piece of ordinary writing-paper three-quarter inch wide by three inches in length, wrap this paper around the band, and place the ends in the jaws of a vice, drawing the paper snugly around the band.

Pour this tube or mold with fusible metal; you have now the neck of the band telescoping over a metal post. Remove the band and also the moldin from the band and replace again on the metal, and return the same with the metal attached accurately in the impression. Pour as usual, the result being a cast of the teeth and gums in plaster with the bands on the metal posts. The bands can now be removed at will any number of times and accurately replaced without injury to the cast. You can also (providing the teeth have been ground sufficiently) contour the bands to correspond with the adjacent teeth. The caps for the band can now be soldered and the dummies set up and articulated and the whole piece removed from the cast, invested and soldered; after this is done it can again be placed on the cast and proven.

Should one of the abutments be a pin-crown, such as a Richmond, the procedure is somewhat different, though essentially the same. Perfect results can be had, permitting the pin with the base or whole crown to be removed with ease and replaced with perfect accuracy. The method is simple and can be done in a few moments before pouring the impression with plaster. Take a strip of annealed copper plate 42 gauge, say five-eighths of an inch wide by two inches in length. Fold this strip once and slip the pin between the closed end. With a pair of pliers or with the fingers the copper can be molded in a few seconds around the pin, forming a tube for the same with the ends protruding. Close the upper end of the tube by

squeezing with the pliers, and see that the pin works easily up and down the tube. The tube should inclose the entire pin from the base to beyond the top, and if there are any undercuts in the Richmond band the same should be filled in with moldin; otherwise it could not be easily removed from the metal post. Now take the paper as before in the case of a band, and wrap this around the base soldered to the pin, the four ends—namely, the two copper ends projecting from the tube and the two paper ends—being brought in the vise (I have devised a convenient clasp for this purpose) and the metal poured between the paper and around the copper tube, no metal coming in contact with the pin at all. When cool remove the paper, and with a pair of shears cut off the copper ends close to the metal. The pin with the base can now be removed, replaced and returned with the metal attached in the impression.

In case of an accident during the soldering process or otherwise a piece of work involving a great deal of time and patience may be ruined. The model having been destroyed, of course the work would have to be done over again. As the model in my method has not been destroyed, it permits of the parts being readjusted and soldered as before. I claim also for this method perfect results with little or no pain to the patient, as the bulk of the work is done in the laboratory.—*Cosmos, June, 1899.*

* * *

CENTENNIAL ANNIVERSARY OF THE DISCOVERY OF NITROUS OXID GAS. By George Fuy, England. It will be of interest to all dentists throughout the world to learn of the centennial anniversary of the discovery of nitrous oxid gas. One hundred years ago this summer (summer of 1799) Mr. Humphrey Davy wrote to Mr. David S. Gilbert the following: "It appears that the Nitrogenous Oxid which I have collected is able to produce insensibility to physical pain, and likely it might be employed in minor surgical operations." The first person to inhale this gas with a view of demonstrating its anesthetic effects was Mrs. Beddoes, a physician and daughter of Richard Edgeworth. Thus the year 1899 marks the anniversary of one of the most important medical discoveries of the 19th century.

TO PREVENT THE RAPID SETTING OF CEMENTS. By Dr. Evans. Take a glass bottle having four flat surfaces and fill the bottle with ice water. Mix the cement on any one of the outer sur-

faces and the heat of the summer will not affect the setting of cement. When the cement sets too rapidly its qualities are decidedly disturbed and the durability as well its sticky qualities are lost. In the winter the bottle can be slightly warmed. Most cements work best at a temperature of about 70 degrees F. *Translated by Dr. B. J. Cigrand for the* DENTAL DIGEST *from April, 1899, Zahntechnishe.*

TO STOP NOSE BLEED.—Grasp the nose between the thumb and forefinger, and press backwards against the alveolar border of the maxilla, and downward against the teeth. This compresses the lateralis nasi and septal arteries. Satisfactory results also follow the use of tanin and acetanilid. —*The Laryngoscope.*

MINUTENESS OF BACTERIA.—In order to convey some concrete idea of the extreme minuteness of bacteria, it has been calculated that if a postage stamp seven-eighths of an inch long and three-quarters of an inch wide (22.2 mm. by 19.05 mm.) were covered by a single layer of the typhoid bacteria, placed end to end and side by side, 500,000,000 bacteria would be required.— *Bulletin of Phar.*

NASAL HEMORRHAGE.—A ligature is passed through the nose in the same manner as for posterior plugging. A piece of gauze is folded to from sixteen to twenty-four thicknesses (according to the size of the nose), making a pad about an inch and a half long and three-quarters of an inch wide. The ligature is tied around the middle of this gauze pad, which is then drawn into the naso-pharynx by traction on the ligature and aid from the finger, and then by steady pulling on the ligature into the posterior part of the nasal cavity. As the pad enters the nose the ends fold back thus doubling its thickness and making pressure on the lateral walls. It has been my experience that as the pad is drawn into the nose the hemorrhage stops. No anterior packing is required.—*A. W. Watson, Univ. Med. Magazine.*

ULCERS OF THE TONGUE.—Avoid the use of caustics and all irritants in the treatment of chronic ulcers of the tongue. Such ulcers are usually malignant, tubercular or syphilitic. A trial treatment with anti-syphilitic remedies may prove both encouraging and deceptive, from the fact that it is not uncommon for carcinomata and sarcomata to make some temporary improvement under the influence of mercury and iodids. The differential diagnosis is sometimes difficult to make, especially so without microscopic examination, but when made, active treatment should begin at once. A cancer must be excised wide of all suspected tissue and all enlarged tributary glands be removed. Actual cautery is necessarily limited to the primary sore, and consequently is insufficient. "Radical treatment or no treatment" is a dictum emphasized by all experience. Lupus of the tongue should be thoroughly curetted under local anesthesia, the base of the ulcer seared with paquelins or electro cautery and then be painted every day for a week with tincture of iodin. If the ulcer be specific it will gracefully yield to the mercuric and iodidic persuasion.—*Med. and Surg. Monitor.*

Letters.

NEW YORK LETTER.

NEW YORK, July 20, 1899.

To the Editor of The Digest,

MR. EDITOR:—Nothing like June weather in New York, but so soon as we pass the Fourth of July we see the effects of the approaching midsummer, as it presents vacant homes which can be counted by blocks and almost by entire streets. It is sufficiently impressive to see homes with down-drawn curtains, but when the custom is prevailing so far as to board up the houses and make them look like dry-goods boxes, they are gloomy indeed.

The societies have closed their doors until autumn. Dr. Henry S. Nash finished the session of the Odontological Society with a very interesting paper dealing with various portions of our nomenclature. So satisfactory was his article that he is down for the opening session in the autumn.

Although for many years a non-attendant at all of our meetings, Dr. Nash bids fair to become a valuable acquisition. We are sure that our literature will be much enriched by his writings, although we are led to think that there is no need of such contributions—that is, if we accept for facts some things that have appeared in our journals of late.

It will give everyone much pleasure to know that Dr. Williams intends to be present at the National Meeting, which convenes in a few days. It would seem as if the well-educated and fair-minded men who compose that body can get rid of some of the different opinions which they hold on scientific subjects, and it is hoped that after crossing swords these men can amicably adjust their disagreements.

Dr. A. L. Northrup goes on a trip over the continent, sailing early in July. He has earned his vacation, for he is doubtless one of our busiest practitioners.

Dr. Eugene Palmer goes to Europe every year. Lucky boy, of his veteran and much respected father. We had a patient recently, fifty-seven years old, who showed us a filling that was put in forty-one years ago by Dr. Palmer, Sr.

Rumor has it that New York is to gain one of Chicago's prac-

titioners. Daniel Webster said there was plenty of room up-stairs, and not a few of them are climbing our sky-scrapers, although there are plenty of them in Chicago. Dentists have several advantages in these high buildings—good light, better air, and a long ride in the elevator.

We saw Dr. Jenkins recently but did not know who he was until we were told, although we knew him years ago at Dr. Atkinson's office. His attire is as neat as are his porcelain fillings.

Dr. Bodecker sailed for Bremen this month. He has sold his office here and is practicing in Germany.

Dr. C. M. Richmond has invented an aluminum cigaret wrapper that keeps the ash inclosed as it burns, keeping it from dropping, and does away with the injury to the mucous membrane. All this is claimed for it, but the best part of it is that he has gotten $20,000 cash and an interest in the company which has been formed.

The *Dominion Journal* for June has quite a "Catching" article. One remark in it is also catching, and it shows a little of the murmur. Two well-known practitioners who died recently also remarked to us not long ago that they thought the professors and supply houses were getting all the money out of dentistry nowadays. As Dr. Catching says, the dental parlors do annoy some practitioners. The proprietor of one of these institutions condemned some of our work recently, but we have gotten to the point where criticism of such individuals does not count for much. We passed our sixty-eighth year the thirtieth of June.

The *Items* has not a little hot weather material in its July number. It is easy to attack men under the written code of ethics, but not a few screen themselves behind the unwritten code. The man who harbors a crime in heart is held responsible just so much as one who commits an overt act.

We notice the editorial in the July *Cosmos* which exposes a very weak man and shows a weakness in him that is hardly worthy the attention that the editor gives him, yet it emphasizes an important suggestion concerning the need of unity and professional *esprit de corps* which should be made manifest.

Cordially, NEW YORK.

SUDDEN GROWTH OF TUMOR.—A tumor which, having existed for a long time, suddenly begins to grow, should be regarded with the gravest suspicion. It is probably malignant.—*Med. Record.*

The Dental Digest.

PUBLISHED THE TWENTIETH DAY OF EVERY MONTH
At 2231 Prairie Avenue, Chicago,
Where All Communications Should be Addressed.

Editorial.

NATIONAL DENTAL ASSOCIATION.

The meeting of this organization which takes place next week, beginning Aug. 1, bids fair to be of unusual interest. The importance of its adopting the proper plan of procedure as relates to its literary work cannot be overestimated. Being a new organization, it should start out on new lines and make its work more effectual than was done by the old society.

Some of the older members will recollect that originally the American Dental Association arranged the literary program through a committee; that is, this committee secured and selected the papers to be read, which of course made the proceedings nothing more than a mass meeting. A change was finally adopted, the design of which was to have the work largely done in the sections. However, the contemplated improvement in the literary proceedings was not brought about, and the section work has not been carried out so effectually as we think it should have been.

Now as the new National has adopted this portion of the American's plan without any special change, it is to be hoped that the section work will be reformed so as to give the result of the year's effort in condensed and digestible form. This can be accomplished only by a proper appreciation of the scope and significance of the section work. Properly all papers should be placed in the hands of the chairman of the section some time previous to the annual session, so that he could prepare a skeleton report to be presented to the section, which report could be amended as desired. This would furnish something to work upon and would present the well-considered views of one member of the section as to what the final report should be. Without some such method and a largely increased zeal on the part of the members of the sections very little can be hoped for.

The National now has ten sections, and we think it is a mistaken

idea which prevails in the minds of many that all should make a report each year. What was originally contemplated, and we believe it would be an improvement, is to devote at least half the time of the four days to the work by sections individually, that is, all the sections should have meetings and work as separate bodies, spending the time condensing material, which has been gotten together during the year, into a report which should be free from superfluous matter.

We have called attention at different times to the imperfect way in which the section work was being done, and we mention it again for the reason that an examination of the program this year, which gives the list of papers promised and which will undoubtedly be presented, shows the impossibility of such a mass of matter being considered in the general meeting during the four days of the session, and which are of enough importance for each section to take such of the papers as should properly come before it and spend sufficient time in putting them in shape, so that when that section is called for it will have a creditable report to make. There are many articles which must go to the sections to which they belong and which should be read and considered and put into one report instead of being read as separate papers, so far as this can be done without any loss of the important points. While this cannot always be done with every paper, it can be to a very great extent and a report made up which would occupy the time of the Association profitably for at least a day, and thus do away with so much repetition from year to year as we have had.

The great number of papers that will be presented this year can be considered properly only by dividing them and having such as cannot be heard this year brought in by the sections in their regular order the succeeding year. For instance, sections 2 and 3, which are first on the program this year, will have important material enough after they have properly considered it in the sections to occupy all the time that can be given by the general meeting, and what is not heard in these two sections will properly lie over for the meetings to come.

Another means whereby the sections can be of much more benefit to the National Association would be for them to have their work go on during the year, as of organizations in themselves, under the guidance of the officers.

Another reform that has been agitated, and we believe should be adopted, is to take from the consideration of the general body much of the miscellaneous business which should be done in a council. An amendment of the by-laws with a view of adopting this course was offered last year and will come up for action this year. We believe the amendment in general should be voted on favorably, as such a plan would save a large amount of time that is much needed for the consideration of the literary work coming before the Association, and this time is now consumed with miscellaneous business. In brief, the amendment contemplates having all this business transacted by a council made up of members of the Association who should hold meetings for this purpose outside of the general sessions.

We are discussing the question at this time because the National Association is starting on a new career, and it is important that we work along right principles. A little earnest thought by any member desiring the success of the Association can hardly fail, we think, to convince him of the wisdom of the suggestions just offered, and these opinions are held by many men of experience who have given this matter serious study.

POSITION OF THE DIGEST AS RELATES TO HIGHER STANDARDS.

In discussing the question of better qualifications for those entering the profession, which we have been doing at frequent intervals during the past five years, we have been actuated by one motive only—the betterment of our calling. That this is desirable is generally admitted, and in order to bring about reforms it is important that the defects, abuses and shortcomings from different sources should be kept prominently in view.

We have emphasized the duty of the colleges because the improvement must come entirely through them. They may of course receive such aid as can be given indirectly, but upon their action depends almost wholly the future condition of the dentists. As we have discussed this in detail in the last two issues of the DIGEST, we will not here attempt further elaboration, but will merely add that we have been and still are one of the strongest advocates of associated effort. It is especially desirable that the colleges shall have an affiliation, and we cannot see how the improvement can be brought about without concerted effort, hence we would be one of

the strongest supporters of the Faculties' Association—if the members thereof would do their duty.

At the same time no one will deny the advantage of having good dental laws and competent men to enforce them and aid the colleges by their cooperation. We regret to say however, that the state boards and state laws are far from what they should be. The laws in several states have little influence except to compel those entering the profession to go through college and are defective in many particulars; and we are well aware that the criticism made of many of the appointments on the boards are justifiable.

One of the greatest needs at this time is to secure comprehensive and uniform laws in each state and then have the proper officers enforce them. This can be readily accomplished if there is united effort on the part of those who have the best interests of our profession at heart, and we hope to see at our National meeting this year such a move put on foot as will bring about the desired condition. In this connection we would urge a perusal of the article by Dr. Ottolengui which will be found in our columns this month.

Fully as important as the securing of a good law is the appointment of competent examiners and the entire removal of politics from the question. In some instances the selection is made by the state society, but the legality of such a proceeding is questioned. For the state society to select members of the board is a step in the right direction, yet it should not be the only consideration. The qualifications of the appointees should be prescribed in the law fully in detail, so that whoever made the appointment would be restricted by those provisions.

When we have a good and comprehensive law and competent examiners, a National Association made up from those examiners will be a still greater influence for good. No one will claim that either the Examiners' or the Faculties' Association is perfect at the present time, but to bring about the much-needed improvement it is necessary that a spirit of conciliation and harmony prevail among those having charge of affairs, and as both organizations are at fault in this matter we would especially urge the importance of those holding radical views, which are in opposition to harmonious action, to abandon their own personal preferences.

We make this brief statement of our views because some of the college men are unable to recognize truthful criticism, and even

when obvious shortcomings are pointed out they impute animosity as our motive. This is especially true of our old friend and teacher, the editor of the *International Dental Journal*, who, because we have pointed out certain faults, accuses us of dishonesty and unfairness. When we urge the importance of the Faculties and Examiners working in harmony he states that we are opposed to the colleges and in favor of the Examiners. Dr. Truman has been connected with college work so long that it is barely possible he is prejudiced and unable to look at the matter fairly. Let us quote from his editorial? "If the DENTAL DIGEST finds its interest runs that way (towards supporting the National Association of Dental Examiners) and not in the direction of the colleges, etc." In another editorial in the same issue he says: "These two organizations (Examiners and Faculties) have little in common." Such statements are most deplorable, and show only too clearly the prevalent feeling among dental educators—one of blind subserviency to their own interests and unreasoning antagonism to the Examiners. We feel quite sure, however, that the members of both the Faculties' and Examiners' Associations realize the need of reform, and we sincerely hope to see a great advance in this direction at their meetings this week.

The DIGEST pledges its support to any reform movement that may be projected in the interest of harmony and progress, and meanwhile we desire to define our position, which is one of the utmost friendliness to both the Examiners and the Faculties. These bodies have, as a matter of fact, taken upon themselves semi-public functions and cannot be regarded as immune from criticism. "Faithful are the wounds of a friend." Those who feel that we are at times too severe should endeavor to discriminate between honest criticism and hostile attack.

"GLOOMY."

In the May issue of the DENTAL DIGEST appeared a lengthy editorial in which the statement was made that fifty per cent of the graduates of dental colleges never enter practice. Just how the editor arrived at such a conclusion we are unable to determine. From our own experience as an examiner in previous years on the State board in Illinois we venture to assert that even ten per cent would be too high an estimate of those who abandoned the profession during the first year. In some cases men have been compelled from physical causes—imperfect sight, and weak lungs mostly—to enter other channels. The question of gaining a livelihood in the profes-

sion is at all times a serious proposition, but not more so in dental practice than in other callings. If the writer of such pessimistic views will look over the field of literature, journalism particularly, he will find that lawyers, doctors, clergymen and others have recruited its ranks because they found themselves unsuited by their first choice of a profession. We consider it an evidence of good sense on the part of anyone leaving a profession if such person finds he is unfit for the exercise of it. The idea that is advanced by the writer of the editorial above mentioned that the profession is overcrowded is absurd on the face of it. Not thirty per cent of the people know the value of dentistry and do not secure the services of dentists. The remainder are being educated and the dentists of the future will be required to care for them. Dental manufactories and dental depots are being started all the time. If there was no sale for their wares they would not thus bid for patronage.

We have been observing things in this country of ours for thirty years or more, and we unhesitatingly declare that there is more to do every day now than there was in a whole week in 1870. The profession is not only prosperous but it is on the aggressive. If students are desirous of acquiring knowledge they can get it in the colleges, and much of the clinical work is done for little or nothing in order to give the students practical instruction. The members of the dental profession are to a large extent blamable for the supposed lack of suitable material in colleges. They do not in all cases send the best boys in the community and the colleges must do the best they can with such *timber* in sight. There is a gradual improvement in the educational qualifications of those who come from college doors, probably rapid enough to keep pace with the development of the whole country. Such an unparalleled advance in education as has taken place in the past fifteen years has never been equaled in any country where dental science is taught. The very gloomy picture drawn by the editorial mentioned is overdrawn and is not warranted by the facts, and the charges made are scarcely capable of proof. It has come to a pretty pass, indeed, when irresponsible utterances like these are taken for solid gospel truth by the unthinking reader. We are always ready to hold up the hands of the examiners' association and the faculties' association, too, when they are engaged in a work that will help to elevate the educational status of our members, but we do not believe all men are vile and dishonest and incapable.

The charge that infirmaries are run to make money and the other charges of like character are in keeping with the whole tone of the editorial. Guerrilla warfare of this sort is what causes older and more settled nations to hold aloof from recognizing the real advances that are being made along all lines of educational work. No stream has greater force than the sources from which it sprung, and the assumption that all wisdom rests in the association of examiners or of the faculties even, is in keeping with the tone of the reflections indulged in by the self-appointed censor of dental politics and morals.—*Editorial in the July Dental Review.*

We print this mournful jeremiad with apologies to our readers. If the author were not a better dentist than he is a writer we should

be at a loss to understand how he ever came by the numerous suffixes that adorn his name. It would be an insult to the deans and secretaries of colleges who may take honest exceptions to our statements to suggest that the writer of this ungrammatical screed is their mouthpiece. The question is certainly a debatable one, and we would welcome an able disputant. Won't somebody please convert the *Review's* slovenly language and false logic into respectable English? The editor of the *Dental Review* and the ostensible author of "Gloomy" is nearly sixty years of age. He states that he has been observing things for thirty years, which leads us to reflect that his early education was probably prosecuted under serious disadvantages. It is evident that our critic came into possession of the important sense of sight rather late in life, and we sadly fear that his mental vision is still waiting for the light.

Notices.

SOUTH CAROLINA STATE DENTAL SOCIETY.

This society met at Harris Springs, July 11-13, 1899. The following officers were elected: President, P. D. Connor; Vice-President, Dr. Crymes; Secretary, R. Atmar Smith; Treasurer, Geo. Dick.

NORTHERN IOWA DENTAL SOCIETY.

This society will meet at Clear Lake, Sept. 5-8, 1899. Drs. Black and Prothero of Chicago will take prominent part. For information address the secretary, W. R. CLACK, Clear Lake.

INDIANA STATE BOARD OF DENTAL EXAMINERS.

This board met with the state association at Terre Haute June 28, 1899. The board for this year is as follows: M. A. Mason, Ft. Wayne; R. I. Blakeman, Indianapolis; N. W. Hiatt, Marion; R. T. Oliver and Dr. Haas of Evansville, the latter being selected to succeed F. C. Greene, of New Albany

WISCONSIN STATE DENTAL SOCIETY.

This society met at Madison, July 18-21, 1899, and adjourned to meet the third Tuesday in July, 1900, at LaCrosse. The following officers were elected: President, J. H. Reed; First Vice-President, T. M. Welch; Second Vice-President, R. J. Wenker; Secretary, W. H. Mueller; Treasurer, H. A. Palmer.

RHODE ISLAND DENTAL SOCIETY,

At a recent meeting of this society at Newport the following officers were elected for the ensuing year: President, V. J. Baggott; Vice-President, G.

H. Ames; Secretary, Clarence A. Carr; Treasurer, Henry W. Gillett; Librarian, D. F. Keefe; Executive Committee, R. L. Davis, W. R. Howard, J. A. Lynch.

MICHIGAN STATE DENTAL ASSOCIATION.

This association closed a three days' session at Port Huron, July 14, 1899. Muskegon has been decided on as the meeting place for 1900. The following officers were elected for the ensuing year: President, H. C. Raymond; First Vice-President, S. M. Fowler; Second Vice-President, C. H. Oakman; Secretary, C. C. Noble; Treasurer, Geo. H. Mosier.

MISSOURI STATE DENTAL ASSOCIATION.

The thirty-fifth annual meeting of this organization was held at Kansas City July 11–14, 1899. The following officers were elected: President, W. L. Reed; First Vice-President, S. J. Smith; Second Vice-President, A. M. Tutt; Corresponding Secretary, B. L. Thorpe; Recording Secretary, H. H. Sullivan; Treasurer, J. A. Price. The next meeting will be held at Louisiana, Mo., the first Tuesday after July 4, 1900.

TENNESSEE STATE DENTAL ASSOCIATION.

This association adjourned July 6, 1899, to meet the first Tuesday in May, 1900, at Memphis. The following officers were elected: President, A. R. Melendey; First Vice-President, J. M. Glenn; Second Vice-President, J. T. Meadors; Secretary, A. Sydney; Corresponding Secretary, M. C. Leonard: Treasurer, H. E. Heath. The board of dental examiners elected W. H. T. Jones, Nashville, as president, and F. A. Shotwell, Rogersville, secretary and treasurer.

PENNSYLVANIA STATE DENTAL ASSOCIATION.

This association completed its session at Reading, July 12, 1899. The following officers were elected: President, Robt. Huey; First Vice-President, Henry Gerhart; Second Vice-President, S. B Luckie; Recording Secretary, C. V. Kratzer; Corresponding Secretary, V. S. Jones; Treasurer, G. W. Klump; Censors, W. D. DeLong, J. C. Hertz, C. M. Bordner, J. L. Fordham, H. W. Bohn. Members of Council G, L. S. Jameson, M. H. Cryer, H. Luten Young. The next meeting will be held at Reading in 1900.

COLORADO STATE DENTAL ASSOCIATION.

This association, which adjourned June 15, 1899, at Denver, will meet at Boulder the second Tuesday in July, 1900. The date of holding the annual convention was changed from June to July to accommodate Eastern dentists who will be invited to attend the next meeting. The officers elected for the ensuing year are as follows: President, A. C. Watson; First Vice-President, J. N. Chipley; Second Vice-President, Mary A. Bradner; Corresponding Secretary, Florence S. Green; Recording Secretary, L. S. Gilbert; Treasurer, Wm. Smedley.

GEORGIA STATE DENTAL SOCIETY.

This society, which was in session at Lithia Springs, adjourned June 15, 1899, to meet next year at Cumberland Island. The officers elected for the ensuing year are as follows: President, W. N. Mixon; First Vice-President, W. H. Weaver; Second Vice-President, A. M. Jackson; Treasurer, H. A. Lowerance; Recording Secretary, S. H. McKee; Corresponding Secretary, O. H. McDonald. Executive Committee—P. H. Williams, M. A. Williams, W. A. Summerlin, C. P. Davis, J. D. Reynolds. Journal Editor, H. H. Johnson.

INDIANA STATE DENTAL ASSOCIATION.

This association concluded its forty-first annual session at Terre Haute, June 29, 1899, to meet in Indianapolis next year. The following officers were elected: President, M. A. Munson; Vice-President, G. E. Hunt; Secretary, F. R. Henshaw; Treasurer, W. W. Mungen. The new committees are as follows: Membership—Alexander Jameson; Executive—H. C. Kahlo; Publication—J. F. Werner, J. R. Clayton and F. R. Henshaw; Ethics—M. H. Raschig, E. E. Pierce, M. A. Mason; Legislative—Maurice Albrecht, M. H. Chappell, R. T. Oliver; Dental Science and Literature—L. F. Ault, H. F. Hussey, J. E. Cravens; Dental Art and Invention—C. M. Hamilton, H. M. Thompson, J. H. Morrison.

CALIFORNIA STATE DENTAL ASSOCIATION.

This association closed its twenty-eighth annual session June 23, 1899, at San Francisco. The meeting was an exceptionally interesting one, a novel feature being the suggestion of rewarding those who might give their time for original research along dental lines, which was accepted by R. H. Cool, who agreed to head a subscription for that purpose with $100. Among other things it was decided not to permit the program committee to accept or invite papers or clinics from men who are not members of the association.

The following officers were elected: President, Walter F. Lewis; First Vice-President, A. T. Merriman; Second Vice-President, A. M. Barker; Third Vice-President, F. L. Platt; Recording Secretary, R. W. Meek; Corresponding Secretary, A. C. Hart; Treasurer, Thomas Iglehart.

LATEST DENTAL PATENTS.

31,028. Design, toothbrush and powder rack, David L. and C. Walmsley, Detroit.

626,737. Dental appliance, Chester J. Underwood, assignor of one-half to G. Sheppard, Elgin, Ill.

626,738. Tooth crown, Chester J. Underwood, assignor of one-half to G. Sheppard, Elgin, Ill.

626,779. Artificial teeth, Wm. H. Baird, Burlington, Ia.

626,810. Fountain spittoon, Walter A. Inglehart, Toronto, Canada.

627,617. Dental spittoon, Frank Hurlbut, Chicago.

627,720. Artificial teeth, Leonard F. Dunn, Oneida, N. Y.

628,185. Finger toothbrush, Charles W. Richards, San Francisco.

628,244. Adjustable dental chair, Gustave Holtz, Jamesburg, N. J.
628,345. Artificial tooth, Henry J. Miller, Paris, France.
33,062. Trade marks—Dental molding compounds, John C. Graft and W. Rodeman, Newark, N. J.
33,096. Mouth wash, James E. Blauvelt, Nyack, N. Y.
33,148. Liquid antiseptic, Allen Ainslie, New York.
33,155. Soap in liquid form, dentrifices, and hair tonic and dandruff cure, Harry C. Richmond, Lima, O.
33,157. Toilet powder for the skin and teeth, Jacob Diner, New York.

HARVARD DENTAL ALUMNI ASSOCIATION.

Nearly one hundred and fifty individuals registered their names at the Harvard Dental School, Boston, Monday, June 26, 1899, on the third consecutive "alumni day" observance. Work of the school for the past year, covering the three classes, was shown and explained; clinics on four subjects were given, and a symposium and papers on three subjects added to the interest of this occasion.

At Young's Hotel, in the evening, one hundred and seven persons were seated at the banquet tables of the twenty-eighth annual meeting of the association. The annual address was delivered by the Rev. George C. Lorimer, D. D., of Boston, whose topic was "The Making of American Character." Dean Eugene H. Smith spoke of the needs of the school, what had been accomplished the past year, and what was in contemplation for the future. Prof. Thomas Fillebrown sketched the progress of the school during the past thirty years. Dr. Frederick A. Stevenson of Montreal, a graduate of eleven years ago, spoke and Mr. Herbert A. Reed responded for the class of '99.

The following named officers were elected: President, Edwin C. Blaisdell, '83, Portsmouth, N. H.; Vice-President, Cecil P. Wilson, '72, Boston; Secretary, Waldo E. Boardman, '86, Boston; Treasurer, Harry S. Parsons, '92, Boston. Executive Committee—Waldo E. Boardman, '86, Boston; William P. Cooke, '81, Boston; Patrick W. Moriarty, '89, Boston. The officers of the association compose the council.

WALDO E. BOARDMAN, Sec'y.

Boston, June 30, 1899.

News Summary.

ALUMNI ASSOCIATION of the Louisville College of Dentistry met June 29, 1899.

W. H. H. WELSH, a dentist of Bloomfield, Ind., burned his hand badly June 21, 1899.

F. M. GRAY, a prominent dentist of Knoxville, Tenn., died of heart disease July 3, 1899.

COLUMBUS (O.) DENTAL SOCIETY closed its meetings for the season with a banquet June 27, 1899.

DR. J. LEON WILLIAMS of London will attend the National Dental Association meeting at Niagara Falls.

J. P. PIELEMEIER, a Pekin, Ill., dentist, died at Freelandville, Ind., July 11, 1899, at the age of 32 years.

GEO. COGLEY, a dentist of Shenandoah, Ia., was fatally injured June 30, 1899, by the explosion of a bomb while fishing.

GEO. H. WEAGANT, L.D.S., one of the best known dentists in Canada, died July 8, 1899, at Cornwall, aged 47 years.

J. W. DUDLEY, a dentist at Flemingsburg, Ky., was badly injured by the explosion of a vulcanizer in his office July 3, 1899.

ARTHUR HAUSER, a dentist of Toledo, according to the *Columbus (O.) Journal*, is wanted at Toledo on a charge of bigamy.

TO KEEP ALCOHOL ABSOLUTE place in it a sheet of gelatin, which by its affinity for water maintains the strength.—*Med. Record.*

S. B. JOHNSON, an old dental practitioner of De Kalb county, died at Auburn, Ind., July 8, after a severe attack of hiccoughs.

MEDICAL LAWS OF NEW YORK.—A recent amendment provides that doctors of dental surgery shall not use the title of "M. D. S."

PULLING A TOOTH WITH A STRING recently brought on hemorrhage, which caused the death of a seven-year-old boy at West Superior, Wis.

DAVID MCBRIAR, for many years a practicing dentist of Columbus, died at Grove City, O., June 25, 1899, of paralysis, at the age of 87 years.

AMERICAN DENTAL SOCIETY OF JAPAN was organized in Tokyo, Japan, June 8, 1899, with Dr. Louis, Ottofy, formerly of Chicago, as president.

CHARLES E. DIEHL, a Braddock, Pa., dentist, was sent to the workhouse recently for ninety days for wife beating, according to the *Pittsburgh Dispatch.*

FRED J. KUESTER, at one time one of the most promising dentists in Salt Lake City, is reported to have been taken in charge by charity commissioners as a result of the morphin habit.

BOSTON DENTAL COLLEGE became the dental department of Tufts College July 1, 1899. A new building for the dental department is to be built near the Tufts medical school in the near future.

BUFFALO DENTAL ASSOCIATION held its annual meeting June 24, 1899. The following officers were elected: President, A. E. Mimmack; Vice-President, O. E. Flagg; Recording Secretary, Chas. A. Kendall; Corresponding Secretary, J. Albert Stackhouse; Treasurer, S. Eschelman.

LEAD-POISONING.—There occurred recently in the Quartier de Monceau (Paris) sixty-six cases of acute lead-poisoning, the result of eating bread from a neighboring bakery. The baker had used for fuel wood that had been painted.—*Med. Age.*

EASTERN ONTARIO DENTAL ASSOCIATION held its twentieth annual meeting at Toronto June 29, 1899. The following officers were elected: President, R. S. Sparks; Vice-President, A. H. Maybee; Secretary-Treasurer, G. H. Weagant; Assistant Secretary-Treasurer, W. B. Cavanagh.

ZINC DIES.—After zinc dies are cast they should be thoroughly annealed before use in an oven or similar contrivance until they are too hot to be held in the hand. This makes them very much tougher and stronger than unannealed zinc dies.

ECONOMICAL.—"That woman tried to beat me down on the price of quinin.'

"What did she say?"

"She said I ought to make it ten cents cheaper because she had to pay her little boy to take it."—*Pract. Med.*

NOT A NON-SEQUITER.—A learned professor and a young lady were talking about the association of ideas as an aid to the memory. She said:

"Professor, is it not strange how one thing brings up another?"

"Yes," he replied, "an emetic usually does."

PERTINENT.—Professor (at last lecture of the term): The examination papers are now in the hands of the printer. Are there any questions to be asked on the examinations?

Voice (from the rear): Who's the printer?—*Yale Record.*

ABORTING BOILS.—Dr. Oehme (*Med. World*) states that boils and carbuncles can be aborted by covering well the affected spot with a coating of collodion, in which salicylic acid (one and one-half or two grains to the dram) has been dissolved. Apply three or four coats within twelve hours.

NOT THERE FOR HIS HEALTH.—"What!" exclaimed the surprised traveler in Florida, "you want me to pay $3 for riding half a mile in your old carriage?" "Certainly," replied the native, with eyes wide open, "yer don't think I'm like you other jays—down here for my health, do yer?"—*Yonkers Statesman.*

LEARNED SOMETHING.—J. H. McCarthy, the son of Justin McCarthy, who is lecturing on Omar Khayyam, says that after a lecture in Brooklyn one of the hearers thanked him for his exposition of the Persian poet's work, and added: "I never before knew the difference between Omar Khayyam and Hunyadi Janos."—*Ad. Sense.*

POTASSIUM CHLORATE FOR BURNS.—The immediate application of a cold saturated solution of potassium chlorate has an excellent effect on burns, relieving the pain rapidly. Superficial burns may be permanently dressed with a solution of salt; but deeper wounds should be treated with full antiseptic precautions.—*Semaine Med.*

ANNUAL MEETING OF THE ROCHESTER DENTAL SOCIETY was held July 3, 1899, at Geneseo. The following officers were elected: President, Dr. Beebee; Vice-President, Dr. Belcher; Secretary-Treasurer, Dr. Proseus; Librarian, Dr. Sibley; Curator of Museum, Dr. C. H. Ward. It was voted to hold the next annual convention in Rochester.

CONNECTICUT STATE DENTAL COMMISSIONERS ASKED TO RESIGN.—A petition signed by sixty-seven members requesting four of the commissioners to resign, because of the nomination of the fifth by the governor, was recently circulated. The member objected to was appointed by the governor contrary to the wishes of the state association, from which organization he had

been previously expelled. Political influence is supposed to be a leading factor in the case.

NOT QUITE CERTAIN.—"Yes, Eddie was slightly wounded in the first fight. We have a letter from the regimental surgeon."

"Where was he wounded?"

"We are not quite sure. The surgeon mentioned the place, but we don't know whether it is an anatomical phrase or a Filipino town."—*Cleveland Plain Dealer.*

FASTING IN ACUTE DISEASE.—Man and animals are rendered more resistant to the action of bacteria and their toxins by abstaining from food within certain definite limits. Even milk when not properly digested undergoes such changes, due to fermentation and putrefaction, that the resistance to bacterial and toxin influence on the part of the tissues and their secretions is lessened. In pneumonia particularly much benefit may be derived from fasting, conjoined with gastro-intestinal disinfection.—*Dominicis, Weiner Med. Presse.*

HEMOSTATIC ANESTHETIC SOLUTION.—A solution which combines the hemostatic properties of gelatin with the anesthetic action of cocain and eucain is prepared by A. Legrand as follows: Pure gelatin, 2 Gm.; pure sodium chlorid, 70 centigrams; eucain, B-hydrochlorid, 70 centigrams; cocain hydrochlorid, 30 centigrams; pure phenol, 10 centigrams; distilled water to produce 100 c.c. The preparation is poured while warm into sterilized tubes; when cold it sets to a jelly, which liquifies again at 20 to 25 degrees C., and may in this state be used for injection. It has been found to give excellent results in dental practice, producing good anesthesia and preventing hemorrhage.—*Nouv. Rem.*, 15, 80.

HARD TO PLEASE.—An English paper tells a story of a man who was attacked by inflammatory rheumatism, and was carefully nursed by his wife, who was very devoted to him in spite of his fault-finding disposition. His suffering caused her to burst into tears sometimes as she sat by his bedside.

One day a friend of the invalid came in and asked how he was getting on.

"Badly, badly!" he exclaimed, "and it's all my wife's fault."

"Is it possible?" asked the friend in surprise.

"Yes. The doctor told me that damp places were bad for me; and there that woman sits and cries just to make the air moist in the room."—*Ware.*

PHOSPHORUS NECROSIS.—Recently before the Berlin Surgical Congress (*Lancet, May 27, 1899*) Dr. von Stubenrauch of Munich said that in experiments made for the purpose of elucidating the action of phosphorus on the bones he trephined the mandibles in dogs and guinea-pigs and injected phosphorus through the alveolus, but necrosis did not ensue. He then exposed the animals to vapors saturated with phosphorus and obtained the same negative result. In order to imitate as much as possible the conditions which the work-people encounter in match factories, the animals were sent to a match factory to be left for a certain time in the drying-room, which is the most unhealthy department. Although the periosteum had been previously

removed from the mandibles, no necrosis took place. Dr. von Stubenrauch therefore concluded that the typical necrosis of workers in match factories is not caused by the vapors alone, but that a specific predisposition must also exist.

DIFFERENTIAL DIAGNOSIS BETWEEN SYPHILIS OF THE THROAT AND DIPHTHERIA.—Somers (*Phil. Med. Jour.*) says that in syphilis of the pharynx simulating diphtheria the temperature is not so high, the patches on the pharynx and tonsil are not so elevated, the adjacent tissues are not so violently inflamed, and there is usually some concomitant symptom, such as the dermal eruption. In a number of cases of diphtheria there is a somewhat symmetric arrangement of the membrane; but this is more marked in syphilis, and the "Dutch-garden" symmetry of syphilitic ulcers is rarely simulated. The crucial test is the presence of the diphtheria bacillus, but the history of the case, and the amount of acute constitutional symptoms, together with the course of the disease, must be taken into account.

WERE THE ANCIENT EGYPTIANS CANNIBALS?—It would appear that archæological discovery has demonstrated that the ancient Egyptians, 3000 to 3500 B. C., were cannibals. Prof. W. Flinders Petrie, an Egyptologist and excavator of fame, has successfully brought to light this fact. In the recent unearthing there were found piles of ribs and flesh-scraped bones, showing where human teeth gnawed them. Professor Petrie found these evidences while excavating a group of old Mastaba tombs of 3500 B. C., in a cemetery near the village of Deshashab, some sixty miles south of Cairo. Professor Petrie, from extended investigation, concludes that the source of Egyptian cannibalism can be traced, and is probably due, to the Libyans who invaded and occupied Upper Egypt about 3000 to 3200 B. C. They habitually cut off the head and mutilated other parts of the body, and ate the same before burial.—*Tri-State Med. Jour.*

NEW ANATOMY.—*Practical Medicine* for May has collected the following instances of the newer (literary) anatomy: The murderers have discovered some astonishingly vulnerable parts of the human anatomy of late. From a paper this morning we learn that a Georgia colonel was "shot in the ticket office"; the other day a man was fatally shot "through his door," and not long ago another received a fatal wound "in his window."—*N. Y. Commercial Advertiser.* He kissed her passionately upon her reappearance.—*Jefferson Souvenir.* She whipped him upon his return.—*Hawkeye.* He kissed her back.—*Constitution.* She seated herself upon his entering.—*Albia Democrat.* We thought she sat down upon her being asked.—*Saturday Gossip.* She fainted upon his departure.—*Lynn Union.* He kicked the tramp upon his sitting down.—*American Pharmacist.* We feel compelled to refer again to the poor woman who was shot in the oil regions some time ago.—*Medical World.* And why not drop a tear for the man who was fatally stabbed in the rotunda, and for him who was kicked on the highway? For all the above we are indebted to the *Medical Age*, but it fails to mention the fact of the woman being accidentally shot in the waterworks or the man injured upon the long bridge.—*Col. Medical Journal.*

TO A DELINQUENT PATIENT.—The following is taken from the *Gross Medical College Bulletin:*

If I should die to-night—
And you should come to my cold corpse and say,
Weeping and heartsick, o'er my lifeless clay;
If I should die to-night—
And you should come in deepest grief and woe,
And say "Here's that ten dollars that I owe,"
I might arise in my great white cravat
And say, "What's that?"

If I should die to-night—
And you should come beside by corpse to kneel,
Clasping my bier to show the grief you feel;
I say if I should die to-night—
And you should come to me, and there and then
Just even *hint* 'bout paying me that ten,
I might arise awhile—but I'd drop dead again.

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